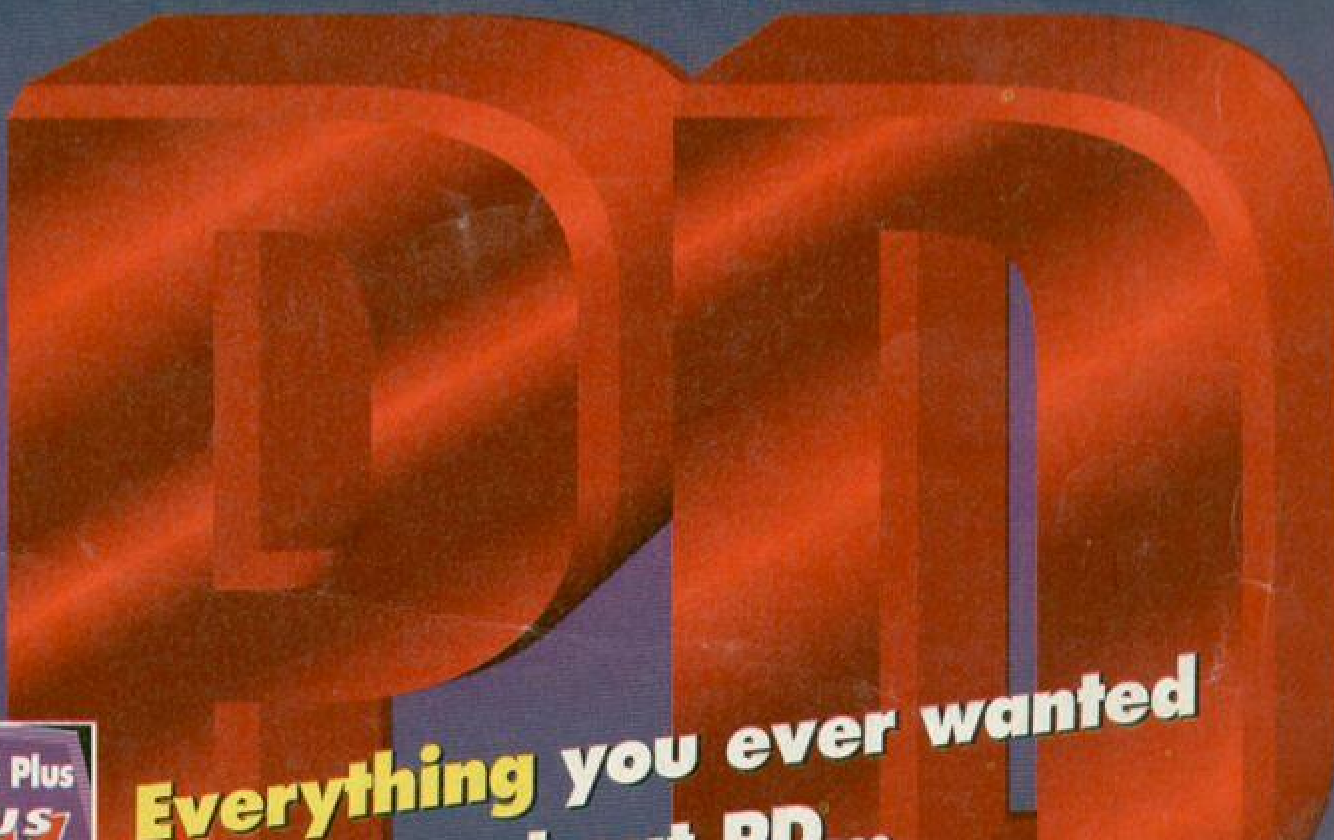
Accept no imitations – if you own a CPC the only mag you need is...

AMSTRAD ACTION

ISSUE No. 112
JANUARY 1995
£2.95

GOING PUBLIC IN '95!



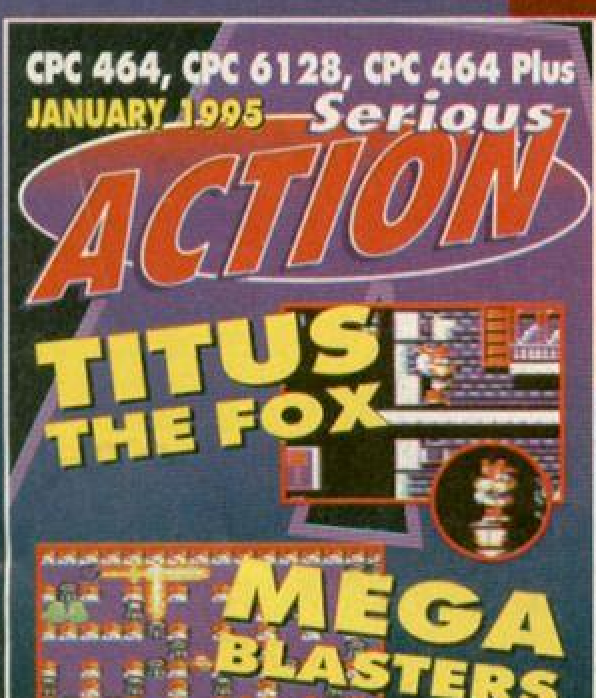
The Top 50 PD Titles!

PD, Shareware and Almost PD – Explained!

PD Libraries!

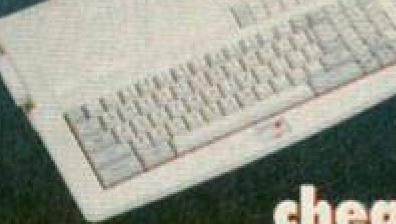
PD History!

Everything you ever wanted to know about PD... ...but were afraid to ask!





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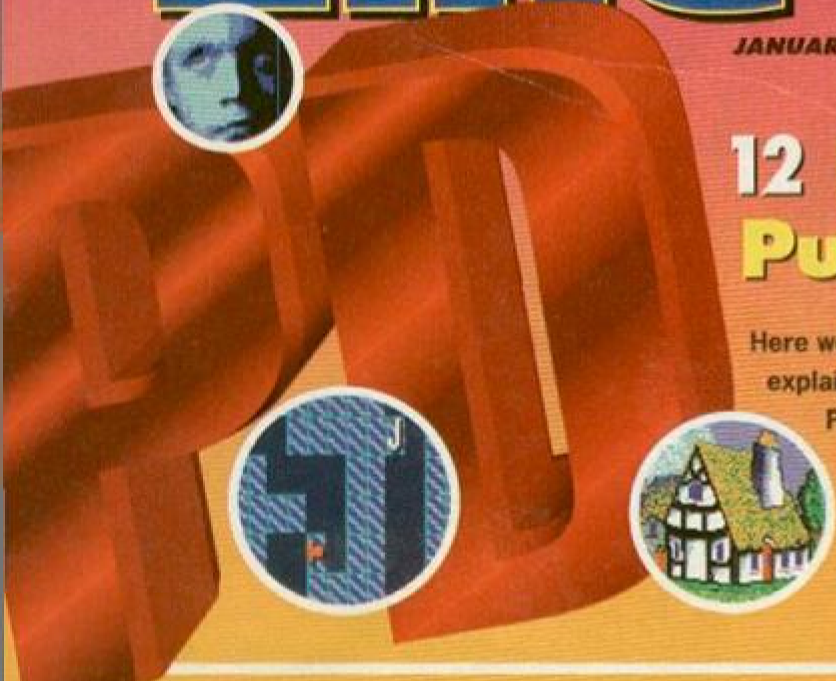
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9 770954 806041

AMSTRAD ACTION

Line-up

JANUARY '95 ISSUE 112





On this month's covertape...

Titus the Fox

It is with a chest-swelling pride that we introduce this superlative platformer. It's not been easy, but we've managed to squeeze all seven gorgeous levels on to this one perfectly presented tape!



MegaBlaster Demo

Radical Software's master blaster received a massively impressive rating of 94% when we reviewed it last month. Now it's your to try in this equally impressive demo!

Desktop Organise

(Disc only)
Get yourself organised with this disc-locating database and archiving program. (Designed to run with last month's covertape offering, *DES*).

Turn to page 5 now!

Amstrad Action

Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW
☎ 0225 442244 (Sorry, no reader calls)
Fax: 0225 446019

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Arty-types: Steve Fardy and Lam Tang
Contributors: Rob Buckley, Angela Cook, David Crookes, Richard Fairhurst, Dave Golder, Debbie Howard, Lee Rouanne, Richard Wildey and Keith Woods
Ad Sales Executive: Rob Bennett
Publisher: Jim Douglas
Group Publisher: Greg Ingham
Production: Claire Booth
Ad Design: Cherry Coad
Circulation Manager: Jon Bickley

Regulars

Serious stuff

Leisure Zone

AA113 on sale:
Thursday 26 January '95

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Your guarantee of value

ABC 15,168
Member of the Audit Bureau of Circulation
Jul '93 – Jan '94

Reaction

Christmas comes early!

Dear *Amstrad Action*,
I've just got an Amstrad for Christmas *(Considering we received this letter in the middle of December, this guy's either got parents who give in too easily, or he's a very slow writer – Karen)* and I have some questions.
1. Can you put *Bloodwych* on the covertape?
2. Where can I buy Amstrad games?
3. Why can't you do another magazine called Full Amstrad? It could have a full game on it and you could charge £3 for it.
Ian Bruce, Loughborough.

1. We'd love to put *Bloodwych* on the covertape, and, indeed, we have tried on a number of occasions. Unfortunately, tracking down the right people to get permission has proved a bit tricky. If anyone could help us out, we'd much appreciate it.
2. It's difficult to find Amstrad games in shops these days, but there are a few specialist computer game shops that do sell 8-bit games. Look in your local Yellow Pages, then do some ringing around – you might be lucky. Other than that, you have to buy the games through mail order. Check out some of the ads in this issue.
3. Er, we already do a magazine that has a full game on it every month, and we charge nearly £3 for it... **Karen**

Advertise!

Dear *Amstrad Action*,
Does *Amstrad Action* advertise in any other Future magazines to try and get more readers? And if you don't, then why not? Just because *Amstrad Action* only has a few thousand readers, doesn't mean that there aren't any CPC users left.

There are probably loads of people with CPCs that they got second-hand who don't know about *Amstrad Action*, and it's very hard to get hold of the magazine in the newsagents.

Also, would you offer a reduced rate of advertising in *Amstrad Action* to fanzines, PD libraries, etc, to encourage them to advertise (the more advertising, the more pages).
Brian Leahy, Editor, Amstrad User, Ireland

If, say, one of Future's PC mags had a CPC emulator on their coverdisc, then, yes, we would consider advertising in that mag. But we wouldn't advertise as a rule. Believe it or not, we would actually have to pay to have our ads appear in other Future magazines (well, it does take up space that could otherwise be used for other advertisers) and it's doubtful we would pick up many readers.

As for reduced advertising rates for fanzines and PD libraries, it is something that has been discussed, and you never know what might happen... **Karen**

Pardon?

Monsieur Amstrad,
Bonjour Monsieur. Je demande unparler de francais, aussi il faut aider changer francais, Monsieur Janssens Daniel demande un bon commander pour acheter une Disquette (lecteur DDI pour disquette) et aussi deux boites de disquette CF2 (20 pieces). Il dit, "Combien une lecteur DDI pour disquette + deux boites?" et on peut reponser le lettre pour envoyez vers Saint-Vaast.

Alors on peut recevoir une virement ou mandat de poster ou cheque vers magasin. Et Monsieur doit ecritez une virement de numero.

Mais je demende les jeux de livres (voir chercher livres pour Amstrad CPC 464 (jeux, utilitaires, etc). Attention Monseiur Janssens Daniel acheter les livres tous numero?

Bien comprendre, encore je demande une fois bon commande programme de Special texte ou desktop publishing ou aussi livres Amstrad No 1 et 2 ou comment Discology v6.0 disc ou cassette.

Monsieur Amstrad ecritez le lettre vers Belgique (combien programme de prix?).

Grand merci. Bien lire mais un peu titre de mot a Francais et aussi l'autre parler Angleterre.

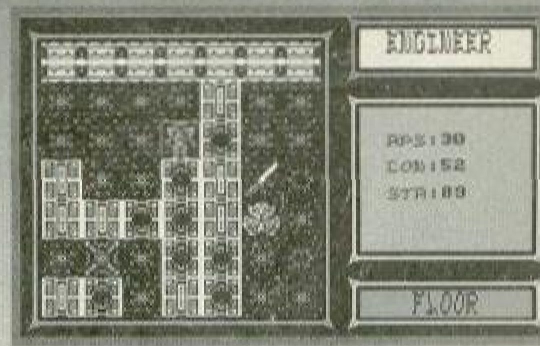
C'est bientot arriver saint-nicolas et Joyeux Noel et Bonne Annee 1995.
Monsieur Janssens Daniel, Ordinateur d'Amstrad CPC 464

That was fun for the spell-checker. I just hope he hasn't libelled anyone... **Karen**

CrystalX to WoW!

Dear *Amstrad Action*,
As owner of CrystalX Software I would like to inform the readers of *Amstrad Action* that I am transferring the marketing of the games *Cloaker, Pacifist, Sector 5, General X, PZP* and *Mantis* (reviewed in issue 99) away from Ultra Software and over to WoW Software. People wishing to buy these games should not order them from Ultra, but from WoW (☎ 0305 784155 after 1pm for price details).

CrystalX Software can no longer supply these games direct. However, the strategy game *Stellar Outpost* (reviewed in *AA99*) will be available for a while at £2.99 on tape and £3.99 on disc for all CPCs. Make cheques payable to A Swinbourne, and send 'em to: CrystalX Software, 11 Vicarage View, Redditch, Worcs, B97 4RF.



CrystalX's *Stellar Outpost* is no longer available from Ultra Software.

I wonder why you've stopped dealing with Ultra, then, Angela? Hmm. **Karen**

Who Said That?

Dear *Amstrad Action*,
I would like to congratulate the team on producing such an excellent magazine in these hard times. It must be a very demanding job for everyone who works on the mag.

I would like to know where I can get hold of the *Who Said That?* game. It was reviewed in *Amstrad Action* number 110, but there was nothing to say how much it was or where it comes from. I have noticed that Radical Software is selling it, but I don't have the address or telephone number.

I would also like to say that your new writers Rob Buckley and Angela Cook are both wonderful to read. They have a nice way of writing. Even I understand their Basic articles.

I have spoken to Angela once. She is a lovely person with a great sense of humour. I wonder if they write anything else for any of the fanzines that *Amstrad Action* reviews? Please let me know.
Jenny Vermont, Lincoln

You're not Angela's gran, or something, are you? To be serious, yes we're pleased with the way our new team of writers is working out as well. It's been all change on the mag over the last year or so (with the exception of the ever dependable Richard Fairhurst), but now the new team is settling in, expect to see some really good stuff in the next few months.

Both Angela and Rob have written for various fanzines, but their main allegiance is to *Amstrad Action* these days.

Oh yeah, *Who Said That?* is available from Radical Software, 57 Lebrun Square, Kidbroke, London SE3 9NS. **Karen**

Serious nutters

Dear *Amstrad Action*,
It's good to see a woman back at the helm of *Amstrad Action*. Let's hope Karen lasts a bit longer than the last one, though. Linda Barker only seemed to be around for a month.

Still, we can only take a new editor as a good sign amid all these rumours that the magazine is about to close. Future would have just closed it down after Dave the traitor left if it was close to closing. But no. We get a new editor. That must mean there's life in the old dog yet. Good.

And even if it is shrinking rapidly, what's left is still good stuff. In the main, anyway. Sometimes I think a few of the features are a bit too simplistic. Since there are only a few thousand readers left, it's safe to assume that they're all CPC nutters and can handle more techy features. So less of these woolly 'what the world owes the CPC' type things. You're preaching to the converted.
Kelly King, Herne Bay

Actually, making the magazine even more serious and techy is exactly the direction we're going in. Dave started this trend (before he took over the mag was still very much kids' stuff – but that really reflects the shift in emphasis in the whole CPC scene) and I intend to continue in that direction. We'll still be retaining our sense of humour, but the subject matter is going to be more and more the type of stuff serious CPCers can really get their teeth into. Karen



Amscene Directory

PD Libraries

Basic PD
3 Beacon Lane, Whipton, Exeter, Devon, EX4 8BD
New cassette-only library. 15p per side of C15 tape (95p if you don't provide a tape).

Colrob PD
9 Aviemore Road, Hemlington, Middlesborough
New tape-only PD library.

Demon
42 Overton Close, Hall Green, Birmingham B28 9NA
3.5-inch discs available.

Image PD
Darren Dodds, 15 Elmwood Drive, Ponteland, Newcastle NE20 9QQ
Also provides a digitising service.

Jamo PD
☎ 0676 533467
A two-side selection costs the same as oneside.

PD Fun
Folly Farm, Cold Ashton, Chippenham, Wilts, SN14 8JR
A policy of 'no serious software'.

PD Point
10 Frimly Close, Blackburn, Lancs, BB2 3TU
☎ 0254 580901

Fanzines

Amszine
Gayton, Laneside Road, New Mills, Nr Stockport, SK12 4LU
☎ 0663 744863

The Eliminator
14 Station Road, Riccall, York, North Yorkshire YO4 6QJ

CPC Undercover
37 Trimingham Drive, Brandlesholme, Bury, Lancashire
Technically minded fanzine.

User Groups

UAUG (United Amstrad User Group)
☎ 0329 234291
An AA-recommended user group.

WACCI
☎ 0602 725108
They're fab. Give 'em a ring.

Indie Software Companies

Campursoft
10 McIntosh Court, Wellpark, Glasgow G31 2HW
☎ 041 554 4735
Please note: this is Campursoft's correct address, not the one stated in previous reviews. Sorry!

Crystal X Software
11 Vicarage View, Redditch, Worcs, B97 4RF
Stellar Outpost is now £2.99 on tape and £3.99 on disc. Please send an SAE.

DMP Software
89 Wolverhampton Road, Codsall, Wolverhampton WV8 1PL

New Age Software
☎ 01049-711-4201920
Responsible for *Zap 'T' Balls* and the excellent *Soundtrakker* program.

Quantum Computing
1 Penbroke Close, The Mount, Par, Cornwall, PL24 2BT.

SD Microsystems
☎ 0760 720381
Specialists in just about every type of business and applications software.

Sentinel Software
☎ 081 876 7032
STS titles and a few original products.

Siren Software
☎ 061 724 7572

Hardware

Datel ☎ 0782 744707
The place to go for mice, printers, memory expansions, all that sort of stuff.

Microform Fax: 0772 703131
Drives, upgrades, disks – all sorts of stuff.

WAVE ☎ 0229 829109
Suppliers of loadsa good stuff.

Software suppliers

OJ Software ☎ 0257 421915
Fast friendly service, the ad says. And it's right.

Software Cavern
☎ 0628 891101
Large selection of CPC software.

STS
298 Holton Road, Top Floor, Barry, South Wales CF6 6HW
They're back – and selling *Soft-Lok* at £14.99.

Tronics North
☎ 010 6177 253 766
PO Box 7419, Garbutt, Queensland Australia, 4814.
The largest supplier of software and CPC bits 'n' pieces in the southern hemisphere.

Mail Order

Trading Post ☎ 0952 462135

Trojan ☎ 0554 777993
Great for cartridge and lightgun stuff.

Wizard Games ☎ 0723 376586
Games on every imaginable format.

Upgrades and repairs

HEC
47-49 Railway Road, Leigh, Lancashire WN7 4AA.
☎ 0942 261866
They've been around for ages, guarantee a fast turn-around, and must be a much better bet than Avatar. Give 'em a go.



Serious ACTION

We're talking seriously packed covertape time here, folks, so take a look at this page before you dive in...

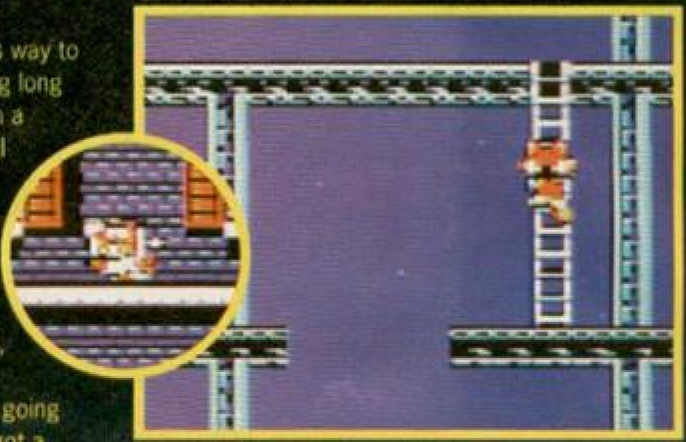
Titus the Fox

Titus Software

Our hero, Titus the Fox, has to make his way to Marrakech and back – which is a flipping long way. Even setting off from Paris it'll take him a darn sight longer than a stroll down the local boulangerie to pick up a few croissants, or whatever it is that French foxes eat.

Titus is a platformer, and a highly accomplished one at that – just take a look at our review back in *AA80*. The graphics are stunning, but more importantly, so is the gameplay. There are seven huge levels, which should be enough to keep you going for quite a few months. And, unless you've got a supply of valium on hand, you'll need to note down the four-character passwords that appear when you jump into certain objects.

You can control Titus with cursor keys or a joystick. It's a rather large multi-load game, and it uses both sides of the tape or disc. So if you get a 'File error' while trying to load a level from disc, or the tape runs out, just flip it over and press any key.



You'll have to be a bit on the foxy side to get through this game!

Megablasters demo



Radical Software

You saw the review last issue, now play a couple of levels from one of the biggest games of '94 – Radical Software's excellent multi-player *MegaBlasters*. There are instructions in the program, so you shouldn't find it too difficult to pick up... and believe me, you'll find it almost impossible to put down again.

Load it up, grab a friend and then blow seven shades out of each other – great fun!

Desktop Organise

Robot PD

This fabulous program makes a database of your disc collection and archives copies of your 3-inch discs on to a 3.5-inch disc.

Best of all, it's written for use with *DES* – Campursoft's graphical user interface, which we featured on *AA111's* covertape. First of all, then, you'll need to transfer the tape to disc. Now load up *DES*, get the disc window on-screen, and run CAT.BIN (under a mouse icon) using the File menu.

When it loads, you'll see a disc marked 'Demos' appear on the screen. This is an example file to show you how the database works – don't worry, you don't have to keep it. Anyway, here's what all the various options do...

File menu. 'Open database' will enable you to load the file containing a list of your discs, while 'Save database' will enable you save it. When you run *Desktop Organise*, it automatically opens a database called MAIN.DB; save your main disc database under this name. You'll probably find it helpful to have more than one database, because of memory restrictions.

Disc menu. To add a disc to your database, select 'Log in new disc'. You won't want to do this at first, because the original database contains some example discs you'll want to ditch. To do this, just choose a disc you don't want (using the 'Go to disc' option) and select 'Update disc'. 'Drive A' and 'Drive B' select a drive for all future operations.

Search menu. This enables you to locate the disc which a particular file is on. Select 'Find file', and type in the name of the file you want – ? and * wildcards are supported. The first disc with the file on will be displayed. To look for the next one, just select 'Find next'.

Archive menu. First, a note: you can only archive from drive A on to drive B. This menu is designed for those of you with a 3.5-inch drive B.

To create an archive file, just decide which archive disc you want to store it on, put that disc in drive B and the disc to be archived in drive A, then select 'Create archive'. To get rid of an archive file, select 'Delete archive'. And if you've changed the contents of a disc, use 'Update archive'. Finally, 'Restore disc' copies from an archive file in drive B back on to a 3-inch disc in drive A.

Loading instructions

Insert side A of the tape and press CTRL and ENTER (type: |TAPE first if you have a disc drive). The tape menu will now load. Using cursor keys and SPACE to select, you can transfer the contents to disc and load any program (except *Desktop Organise*, which needs to be loaded from *DES*). If you want to transfer the files to disc, you'll need a disc formatted in data format on both sides.

Loading troubles?

If your tape comes up with 'Read error a' or 'Read error b', our duplicators, Ablex, are the people to contact. Write to them at: Ablex Audio Video Ltd, Harcourt, Halesfield 14, Telford, Shropshire TF7 4QD, enclosing your tape a stamped self-addressed envelope, your name and address, a description of the problem, and what CPC you use.

However, if the covertape loads okay and you're still having problems getting the thing to actually do what it's meant to, don't shout at Ablex: write to the all-new Covertape Clinic at Techy Forum at the following address: Covertape Clinic, Techy Forum, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

Public IMAGE

Two classic-style games and one all-new and fully customisable disc-letter creator skip merrily into the land of Public Domain this month. Keith Woods is the chap handing out the bouquets of flowers...

Alien Intervention

By Sean McManus

If you were a fan of *Amstrad Action's* erstwhile Type-In section, you may well recall the name of one Sean McManus. Why? Well, he was responsible for a good number of the programs that appeared there. Now McManus has released ten of these proggies into the Public Domain, and this month we take a look at the best two.

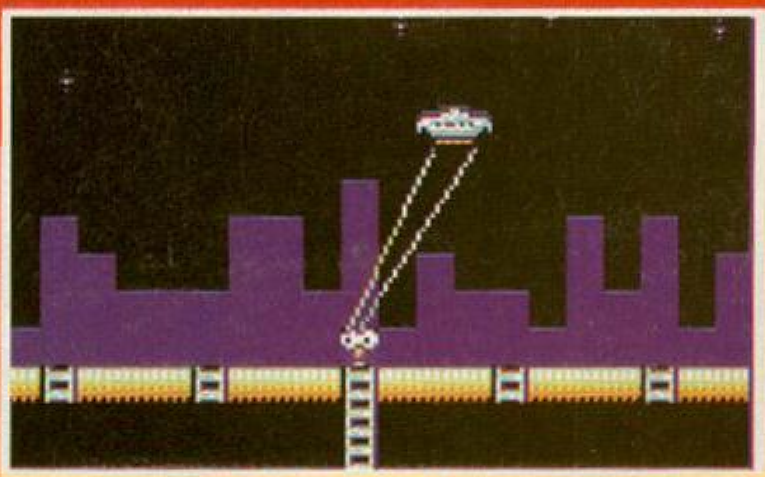
Alien Intervention is essentially a clone of the classic game where aliens attack you from below the surface of the Earth, rather than from their usual stomping grounds in the cold regions of outer space. Quite how they managed to sneak underground is never fully explained, but their friends have finally arrived to free them, and unless you can keep them below the surface, you'll be the first to feel their wrath *(Is that the knobbly bit on the end of their antennae? – Karen).*

The rescuing alien hovers in the sky and throws bits of ladder down to its underground pal. If enough ladder parts hit the surface, the alien escapes and fries you on his way out. To prevent this you have to get in the way of the falling ladder, which appear in any one of five locations.

This may not sound wildly exciting, but it's actually quite entertaining. It moves at a surprisingly rapid rate and is as smooth as it is colourful. The only poor thing about it is that you can never win – the alien rescuer will continue pouring forth ladder parts until they finally reach the surface. The only challenge is in trying to last longer and get a better score than last time.

There was similar clone on the Commodore recently, but unlike *Alien Intervention*, it was being sold as part of a commercial compilation and it still got favourable reviews. What can I say? This is more or less the same game, except on the CPC it's free! A bargain not to be missed, don't you think?

78%



Uh-huh, looks like that's one more alien for Ripley to chase around the Galaxy.

The Further Adventures of Fred

By Sean McManus

'Ah, God be with the good old days. There were none of those new-fangled multi-coloured, fast-moving, all-action games in those days. Naah, it were all fields then.

'When I were young we played games like *PacMan* and *Pong*. Sure, they weren't quite as spectacular as some o' the things kids are playin' today, but they were just as fun. And we had to walk five miles to school in our bare feet and got a good hiding if we were late. Ten of the best, I tell ya, and we were much better off for it. Kids today...'

Er, yes. Grandad, chew on some woodbines while we tell the readers about a game you'd no doubt approve of, namely the laboriously titled *The Further Adventures of Fred.*

This is a game for nostalgia freaks everywhere – yes, even in deepest Mongolia. It's a rendition of the old *PacMan* theme where you walk around a maze, avoid loads of nasties and pick up some goodies.

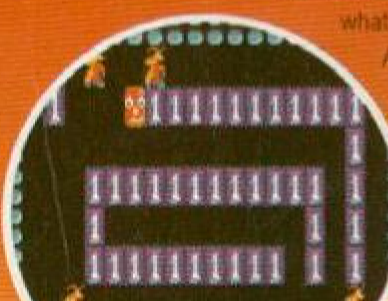
It has all the features you'd expect of a game modelled on a 70's classic – a convoluted title, block graphics and no animation. It also has that one other vital ingredient: naked gameplay! Forget sound, forget graphics, forget inane special moves because, like many games of this type, *Further Adventures* concentrates on one thing and one thing only: pure and simple playability.

It's an example many modern game designers would do well to follow. Fancy graphics won't keep players coming back time after time for just one more go. Only gameplay can do that, and this game has it in abundance.

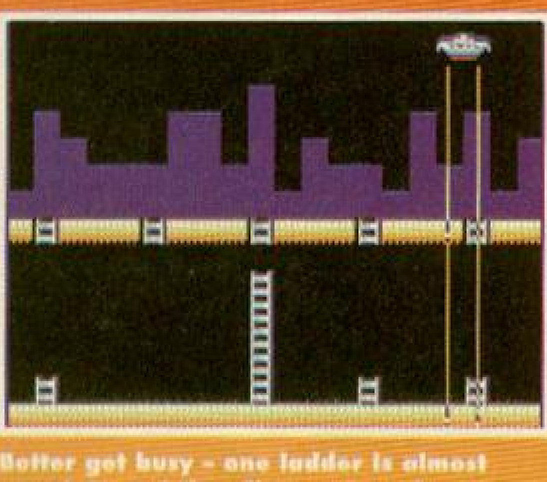
You'll find yourself shouting at the screen when you fail to get to the next level because you were one credit short, or because you were just caught by one of the bad guys, or because you made a mistake you'd never normally make in a proverbial month of Sundays. But most of all, you'll find yourself restarting immediately, because your heart overrules your mind with its protests that next time you're definitely going to make it.

If you're the nostalgic type, get *The Further Adventures of Fred.* If you haven't got the foggiest what I've been talking about, get *The Further Adventures of Fred.* And if you want to find yourself sitting in front of your CPC into the early hours of the morning, get *The Further Adventures of Fred.* Just don't forget the coffee.

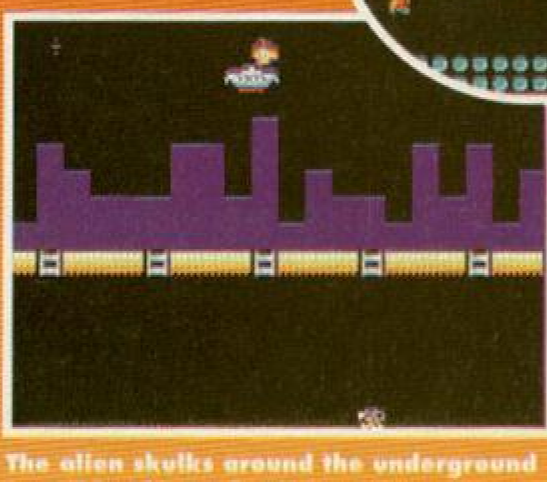
75%



***The Further Adventures of Fred* may not look like much, but it's got it where it counts.**



Better get busy – one ladder is almost complete and the aliens never give up.



The alien skulks around the underground – must be the Circle Line.



Hang around here too long and you're likely to get a real eyeful!



A memory test for MENSA or instructions for *Ghoul's Writer* – you decide.



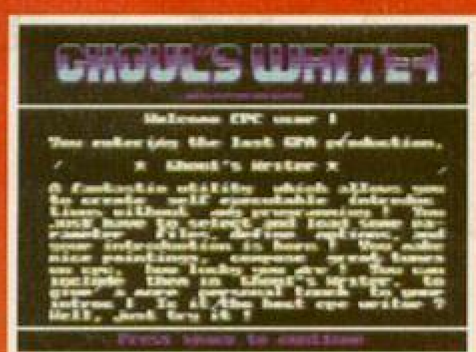
And here's *Ghoul's Writer's* logo maker in all its black and white glory.

Ghoul's Writer

By Tom and Jerry of GPA

If, like many CPC users, your hand aches after spending a day taking notes at school, college or work, the last thing you want to do when you get home is put pen to paper to reply to all your CPC pen pals. It'd be far easier and quicker to bash away at the keyboard, wouldn't it?

The problem with this, of course, is that perfectly formatted *Protext* files are dull and impersonal. A few years ago, MTI recognised this problem and produced a program called *Ghost Writer*, which enabled you to save more interesting-looking letters to disc to send to your CPC friends. MTI's program enabled you to create a self-executing text file containing music, graphics and a friendly font – all without any programming knowledge.



Don't you just love ploughing through all the text on these demo programs. Thought so.

Unfortunately, all *Ghost Writer* files tended to look the same. Now GPA has come up with a solution. Its latest program, *Ghoul's Writer*, aims to overcome this problem by enabling you to customise the files in almost everyway imaginable.

To achieve this, *Ghoul's Writer* uses a text editor, a *Soundtrakker* music relocator, a logo maker, a font maker and a program that combines all these elements in one file. These programs would be valuable in their own right, so the fact that they are only single elements of a package is remarkable.

Of all these programs, the text editor is the most important. Rather than relying on existing word processors and being brought up short by compatibility problems, the program's authors decided to include a full text editor of their own. And if you're flinching at the thought of giving up *Protext*, don't – the text editor contains all the features you're accustomed to and is a veritable joy to use.

To add a personal touch to your messages, you can put your own logo above the text. Simply design the logo in any art package, save it as a standard 17K screen file and the logo maker will do the rest. Don't worry if you're no good at CPC art, *Ghoul's Writer* also includes a clip-art library to enable you take the easy way out.

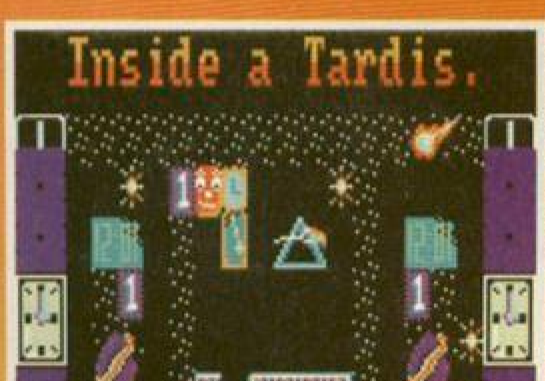
The *Soundtrakker* Relocator simply prepares *Soundtrakker* files for use with the program. Again, if you lack talent, a few sample files are included. It's also easy to pick up more from PD libraries.

Once you've got everything else sorted out, you can go to the Linker. The Linker puts the whole shebang together in one cohesive file. Within it there are many additional choices to further customise your file, such as various screen clearing methods, background animation and text speed.

This is one of the most complete and fully featured packages to come our way in a long time. It's all extremely well programmed and incredibly easy to use. With *Ghoul's Writer*, absolutely anyone can turn out bright and professional disc letters with the minimum of effort. And given the options, the letters look different every time.

Ghoul's Writer is worth getting, if only to confuse your friends. If you don't tell them how you did it, they're bound to be about as gob-smacked as you when you see how good it really is.

94%



And here's Fred on the set of Spellberg's multi-million dollar remake of *Dr Who*.



Fred makes a clown of himself in the tea level of his Adventures.

Public Developments

It's all change on the CPC PD scene with many well-established PD libraries bowing out and just as many new ones coming along to replace them. So much so, we're having a hard job keeping up with all the new arrivals.

The bad news for Irish CPC users is that the Emerald Isle's PD library scene has died out virtually overnight, with both the main libraries, Amsof PD and The Vault, announcing their closures within a few days of each other.

The colourful Derek Hyland of Amsof PD claims the closure is due to his new university course gobbling up all of his precious free time. Spookily, Mark McCormick quotes a similar reason, namely the pressure of exams, for the closure of his well-respected library, The Vault. Seems that the educational system has a great deal to answer for.

Two other well-known Public Domain libraries that headed off to the great disc box in the sky recently were PD Fun and GDPD. GDPD has closed for personal reasons, while Simon Walker of PD Fun has left the CPC scene all together.

Despite all these closures, there's no need to worry about any decline in the CPC PD scene. Filling the void left by the above closures are a few promising new libraries.

Among them is KAD PD, a new library fronted by *Amstrad Action* freelancer Angela Cook and her father, Arthur. KAD (which stands for King Arthur's Domain. Clever, eh?) already has a reasonably impressive catalogue of wares, which it can copy for you for just 80p per a 3- or 3.5-inch disc (both sides).

KAD is already ahead of the competition by being the first library to get hold of the new utility *Rambase 4*, which we'll be reviewing next issue. For more information send an SAE to: KAD PD, Brympton Cottage, Brunswick Road, Worthing, West Sussex, BN11 3NQ.

(You may also be interested to learn that Radical Software will be shifting its base of operations to that address from next month. So, if you're after a copy of *MegaBlasters*, that's now the address to send your cheques to.)

Another new library to make an impressive entrance to the CPC scene is Jamo PD. Run by James Ford, Jamo offers value for money with a promise of quality software and full selections. The price of each selection is 35p (and you won't be asked to pay double for selections that take up more than one side of a disc). Jamo can be contacted at: Jamo PD, 97 Needlers End Lane, Balsall Common, Coventry, CV7 7AE.

From now on we'll be keeping track of what's happening in the PD library scene in Public Image, so if you're opening a new library why not drop us a line at the usual address – Public Image, Amstrad Action, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.



Basically basic

Once again that duo of dastardly do-gooders, Angela Cook and Rob Buckley, have returned with top tips for BASIC programmers. This month they show you how to create a game. Blast!

If you look around the shops nowadays, you'll find that commercial games cost ten times more than the machines they run on. However, back in the days when a Mega Drive was something Nigel Mansell did, and a SNES was followed by 'Bless You', games ran in 40K and, what's more, they were fun too!

Well, now thanks to this here guide, you can revisit those glory days by creating your very own game, using the techniques we've been looking at in *Amstrad Action* over the last few months. The program below shows that BASIC really can produce playable games – and all without the help of a 32-bit graphics processor.

Okay, you remember the star fighter and asteroid routines? *(Time to dig out AA109, folks – Karen)* Simply fly your star-fighter over an icy asteroid, all the while going over or under various obstacles *(They're the yellow rectangular things, right? – Karen).*

Know your lines!

The first few lines of your game's program involve setting up the screen. In lines 30 and 40 you use two FOR loops to draw the asteroid surface. And if you want to achieve smaller bands of colour, just decrease the variable XX to its lowest possible amount. Now you need to introduce MAX, a mathematical function that returns the biggest number from a list. The code XX=MAX(XX,1) ensures your variable never drops below 1. The MIN function does the same thing, only in reverse.

Lines 50 and 70 set the XOR printing and the colour of the PLOT graphics. You also need to set up a number of important variables like SCore and LiVeS. In line 70, the GOSUB 200 command draws a spaceship on the screen. Now you reach the main routine, which constantly repeats.

Line 80 rotates your INK palette, and makes the screen appear to move. Line 90 and 100 erase your spaceship, check the joystick and then redraw the ship in its new position, extremely quickly.

Line 110 is a random check that adds an asteroid to the list result if it reaches zero. The number of times this occurs varies depending on the value of SK – the higher the value, the smaller the chance of an asteroid being added.



Line 20 of the listing produces this handy skill select.

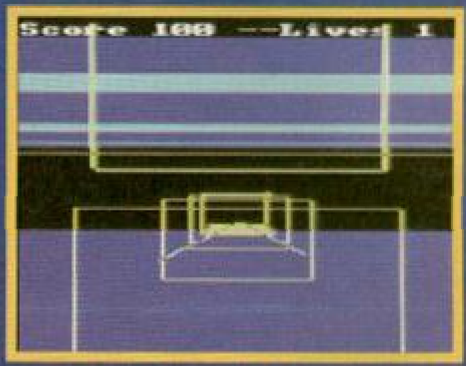
Lines 120 to 160 check each item on the asteroid list, increasing the sprite's scale and redrawing it when necessary. If an asteroid's scale reaches 1, it's erased, and the program jumps to line 210.

Line 170 adds an asteroid to the asteroid list, gives it a scale [BL2()], and decides whereabouts it appears on the screen – either high or low [BL()]. Line 180 draws the asteroid.

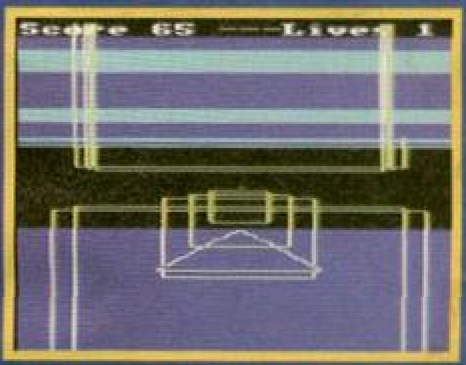
In line 200 the spaceship is drawn at Y pixels up. Line 210 to 230 check to see whether the ship has actually *hit* the closest asteroid. If it has, the screen will light up and a life will be lost (line 210). If the life counter drops below zero we END. Line 220 increases the score, and if the score is an exact multiple of 50 the SK (skill) is decreased to make the game harder. Line 230 loops back into the main routine.

Try it out!

```
PAFB 10·MODE·0:BORDER·0:INK·0,0:INK·1,26:FOR·
     f=8·TO·11:INK·f,24:NEXT
HBLJ 20·ik·(1)·=·1:ik(2)=2:ik(3)=11:INPUT"Ski
     ll·(1-20)",sk:sk=MAX(sk,1):sk=MIN(sk,20)
     :sk=sk+10
FCEA 30·ik=0:cnt=0:lmp=16:FOR·f=0·TO·150·STEP
     ·2:PLOT·0,f,ik+12:DRAWR·640,0:cnt=cnt+1:
     IF·cnt=lmt·THEN·ik=(ik+1)MOD·3:lmt=MAX(l
     mt-2,1):cnt=0
HCEA 40·NEXT:ik=0:cnt=0:lmt=16:FOR·f=398·TO·2
     50·STEP-2:PLOT·0,f,ik+12:DRAWR·640,0:cnt
     =cnt+1:IF·cnt=lmt·THEN·ik=(ik+1)MOD·3:lm
     t=MAX(lmt-2,1):cnt=0
HALF 50·NEXT:PRINT·CHR$(23);CHR$(1);
EBDN 60·PLOT·-4,-4,5:sc=0:lvs=4:INK·5,24:PEN·
     1:LOCATE·1,1:PRINT"Score·0-----Lives·4·"
     ;
HAID 70·tb=1:tc=2:y=100:GOSUB·200
EBPG 80·i=ik(1):ik(1)=ik(2):ik(2)=ik(3):ik(3)
     =i:INK·12,ik(1):INK·13,ik(2):INK·14,ik(3
     )
DBFA 90·GOSUB·200:y=MIN(y+dr,360):y=MAX(y,40)
     :GOSUB·200:IF·INKEY(72)=0·THEN·dr=8
GAPO 100·IF·INKEY(73)=0·THEN·dr=-8
IANJ 110·IF·INT(RND*sk)=0·THEN·GOSUB·170
EBBN 120·a=tb:IF·bl3(tb))1·THEN·GOSUB·180:GOS
     UB·210:bl3(aa)=0:tb=(tb+1)MOD·10:GOTO·15
     0
EAON 130·IF·a=tc·THEN·160
PAAO 140·GOSUB·180:bl3(a)=bl3(a)+bl2(a):bl2(a
     )=bl2(a)+0.01:GOSUB·180
FAKO 150·a=(a+1)MOD·10:GOTO·130
CAIH 160·GOTO·80
ABFB 170·tc=(tc+1)MOD·10:bl(tc)=(INT(RND*2)*4
     0)-20:bl2(tc)=0.01:a=tc
CCAF 180····x1=bl3(a)*bl(a):x=x1*10:v1=320-x:
     v2=200-x1:v3=320+x:v4=200-x:PLOT·v1,v2:D
     RAW·v3,v2:DRAW·v3,v4:DRAW·v1,v4:DRAW·v1,
     v2:RETURN
OAEG 200·PLOT·200,y:DRAWR·120,50:DRAWR·120,-5
     0:DRAWR-240,0:RETURN
GCLN 210·IF·(bl(a)=20·AND·y(150)·OR·(bl(a)=-2
     0·AND·y)170)THEN·FOR·f=0·TO·50:INK·0,24:
     INK·0,6:NEXT:INK·0,0:lvs=lvs-1:LOCATE·18
     ,1:PRINT·lvs;:IF·lvs=-1·THEN·END
ABHC 220·sc=sc+5:LOCATE·6,1:PRINT·sc:IF·(sc·M
     OD·50)=0·THEN·sk=sk-1
CAFJ 230·RETURN
```



According to Angela Cook and Rob Buckley this is a starfighter travelling between asteroids...



... Personally, it looks more like an expression of primitive post-modern cubism.

Happy to help!

Right, that's it for this month, but if you have any queries about BASIC programming, or would like us to cover something in particular, then drop us a line at: BASIC Suggestions, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. Or if you've got a particularly special listing that you'd like to share with your fellow CPCers, bang it on a disc and send it to the same address (Make sure it's just a copy though, because we won't be able to return your disc.)



Further reading

David Crookes munches on a unseasonal hot cross bun as he surveys the latest fanzines...

8-Bit Mart

PRICE: £1
EDITOR: Brian Watson
ADDRESS: Harrowden, 39 High Street, Sutton-in-the-Isle, Ely, Cambs CB6 2RA
☎ 0353 777006

REVIEW

The CPC scene is currently being kept alive by a very capable group of hard-core enthusiasts who endlessly strive to release stonking software for the faithful old machine. But is this the best solution? All the 8-bit systems are going through a torrid time at the moment, so is this the time to offer peace?

Brian Watson clearly believes so, and as actions speak louder than words, he's initiated this unification process by creating a magazine called *8-Bit Mart* that caters not only for the CPC but for the Spectrum, Commodore 64, and PCW as well. In fact, if a machine's in trouble, Watson's your man. But why is he doing it?

'To help keep the 8-bit computer world alive and lively,' is his reasonable response. It's good to see there are still people around with this kind of drive and vision, especially now that the media is forecasting the end of the 16-bits, let alone the 8-bits.

So, what is *8-Bit Mart*? Well, It's a 16-page, A4 publication that includes a small number of articles inbedded within pages of adverts. Okay, so it's not going to be everybody's idea of a good read, but it does offer a unique forum for the machines that virtually everybody else has left for dead.

And if you're on the look out for a particular bit of kit, or the name and number of a given distributor, then *8-Bit Mart* will come in dead handy. Virtually all of the major suppliers are in there, and most of them cater for the CPC. You can also place small ads for free, which'll help you clear your shelves, before you get into ordering more proggies from *8-Bit's* host of advertisers.

But it's not all sell, sell, sell! Although its articles are rather few and far between, what's there is interesting and well written. Advice is the name of the game, with the mag's editorial largely being given over to references to software suppliers – although it does also include some PD reviews.

The multitude of ads serve another, perhaps unintentional, purpose in breaking up the text and furnishing the mag with a delightful design. It all wraps up into a fine, value-for-money, package.

It's undoubtedly a good set-up and one that its editor claims is doing increasingly well. Watson boasts *8-Bit's* readership is already in the order of 501, and who are we to argue?

There's only one real criticism here, and that's a lack of articles – but considering its focus is to help 8-bitters keep in touch with potential sources of software and hardware, that is perhaps a little unfair. *8-Bit* fulfils its intentions admirably, but it's for serious use only.

Content:	**80%**
Apperance:	**78%**
Overall:	**80%**

Impact 4

PRICE: Nowt (PD, see?)
EDITOR: Tom Dean
ADDRESS: 53 High Lane, Burslem, Stoke-On-Trent, Staffordshire ST6 7OF

REVIEW

At the moment I'm busily munching my way through a hot cross bun. I'm trying to avoid the massive white cross, so I'm carefully manoeuvring my teeth around it so that I don't slice through. *(What is this guy on about? – Karen)* It's quite a challenge. And once I've finished, I'll review *Impact*, which is quite a challenge as well.

Just like the hot cross bun, its a case of shifting around to find the best bits. I mean, who wants to plough through all the weird short stories that litter this disc? Actually, they're not too bad, they're just a bit of a hindrance. Take a look at the article menu, for example, and you see a line screaming, 'DIY scrolling text'. So you dutifully check it out, only to discover the instructions require biros, and not Stephen Fry. *(Eh? – Karen)*

What else? Oh yes. An excellent warbling ditty, which sounds just a tad like the *Croco Magneto* tune, plays in the background while you peruse the various articles. Design? Well, it's colourful enough when you first start and the menu stage looks pretty impressive, but when you load up some text, it resorts to a white background with black text. It's all white (sorry, right) once you get used to it, but it does take away some of the glitz.

Okay, it does have its good points. There's a fair number of reviews and news pieces, which should whet your appetite, and, to be perfectly fair, the short stories are good for a spot of light relief (after all, what good's a fanzine if you can't have a laugh?). It's also obvious that Tom has targeted an audience with a weird sense of humour.

I'll be lenient then, and give it a reasonable, non-suicide-inducing mark. After all, it is free. But I should stress that it's still middle of the road stuff – and if it lingers there much longer it's going to get hit by a bus.

Content:	**60%**
Appearance:	**47%**
Overall:	**59%**

Disczines Verses Paperzines

Strange, but true: while new fanzine launches have dipped in recent months, disczines are being launched left, right and centre.

Why? Well, why indeed? Could it be the challenge of trying to beat the existing mags into submission? Like the concept behind demos, perhaps? Or maybe, like everything else, it comes down to a simple matter of finance. As you've probably already surmised, disczines are really cheap to distribute all you need is a PD disc copier. With paper fanzines, though, you need an expensive photocopier.

So, that explains the why, but are disczines any better than their paper-bound competitors? We explore the pros and cons of disc mags...

Pros

- **You usually get a lot more text in a disc magazine than a paper one, because discs can hold tons of stuff. A bit obvious, that one.**
- **Many disc mag authors have latched on to the fact that they don't have to fill two sides of the disc, instead they can use loads of great PD software to fill up any nasty spaces. This is excellent for readers, because even if the mag's crap, you still have some programs with which to play around.**
- **Most of disczines are extremely cheap (around 90% are actually Public Domain). So if you buy a disappointing one, you haven't lost a great deal.**

Cons

- **Unless you have a printer, quickly referring back to particular sections can be awkward because you have to re-load everything and search through piles of menus.**
- **A quick flick through a disczine is impossible. If you were to flick a disc mag, it'd fly out the window and, more to the point, you wouldn't see anything. (You've got to load it, see).**
- **It isn't exactly the most comfortable way of reading. Sitting goggle-eyed in front of a monitor rather than spreading yourself all over the sofa is a bit too up-tight for me.**

Ultimately the way you want your words and pictures is up to you. There is always going to be those who prefer one over the other. Maybe you're a hard-line environmentalist who would like to see all paper-based mags disappear to save some trees. *(Which is why you're reading* Amstrad Action, *I suppose – Karen)* Perhaps you don't care either way, but if you do, why not write to Reaction with your views (on re-cycled paper, of course).

Next Month

We take a gander at an offering from the South West and get WACCI with a look at the famous user group's fanzine.

Want to give your fanzine, leaflets or that letter to Aunty Dot a bit more style? A scanner enables you to convert photos and artwork into electronic images, which you can then show off in your own documents. Richard Wildey lets you into a few scanning secrets...

So why do I need a scanner?



Simply attach the scanner head to your printer, grab your artwork (check the copyright) and away you go!

Scanners work on the principle that when a beam of light is shone on to an object, a piece of paper in this case, the darker parts will absorb the most light and thus reflect back less than the lighter parts. This information is sent back to the computer and transferred into pixels, which are then plotted on your monitor.

The only commercially available scanner for the CPC is the Dart Scanner, which clips on to the printer head of any Amstrad DMP printer. Another scanner was invented for the Amstrad, the circuit diagram and information for which was printed in the book *Easy Add-on Projects for the Amstrad CPC 464, 664, 6128 and MSX computers.* (BP171) *(Hmm, nice catchy title – Karen)*. Published by Bernard Babani. Though in principle it does work, in practice it's extremely difficult to get any recognisable results.

In black and white

Both scanners only produce two-colour pictures in MODE 2. So, bearing in mind how the scanner actually works, the best results are obviously obtained with black and white images. Images with several colours or two similar colours will give poor results. To get optimum results with the Dart Scanner, photocopy the work first. This not only preserves the picture from the ink (you need to remove the ribbon to avoid this), but also turns your image into a straight black and white one.

Next, get hold of some sticky-back plastic and tape the image to the back of a cereal packet, making sure you get the paper taught. *(Next week we'll be showing you how to create a new joystick out of loo paper rolls and an egg carton – Valerie Singleton)* This avoids the rippling effect you get when the printer head moves over the printer. Now feed your cardboard and paper into the printer. You may have to adjust height of the printer head using the switch on the left hand side, though once it's loaded, you need to push it back down to bring the scanner light nearer the paper.

All that's left to do now is to draw the curtains, turn off the lights, let your neighbours know what you're doing so they don't get the wrong idea, and hit the scan button. Darkness is not essential, but it does improve the quality slightly.

Save it!

Once you've scanned your image you can save it out, using the scanning software provided, as a standard 17K screen file, which can then be loaded using the following BASIC line:

```
MODE 2:LOAD·|SCREEN.BIN|,&C000:CALL·&BB18
```

These screen files are compatible with all art packages, but the scanner won't save out an OCP 'PAL' pallet file. There is a way round this, though – just append the following patch to the file DARTSCAN.BAS.

```
IAMC 710·SAVE·|!|+f1$+|.scr|,b,&4000,&4000
MAIN 711·'·Art·studio·PALette·saver·by·R.Wild
     ey
KABC 712·POKE·&8809,2:POKE·&880A,&FF:POKE·&88
     0B,&19
JADJ 713·FOR·p=&880C·TO·&8817:POKE·p,&4B:NEXT
JABJ 714·FOR·p=&8818·TO·&88D8:POKE·p,&54:NEXT
IANJ 715·SAVE [illegible]f$+|.pal|,b,&8809,&EF,&8809
```

Desktop publishing

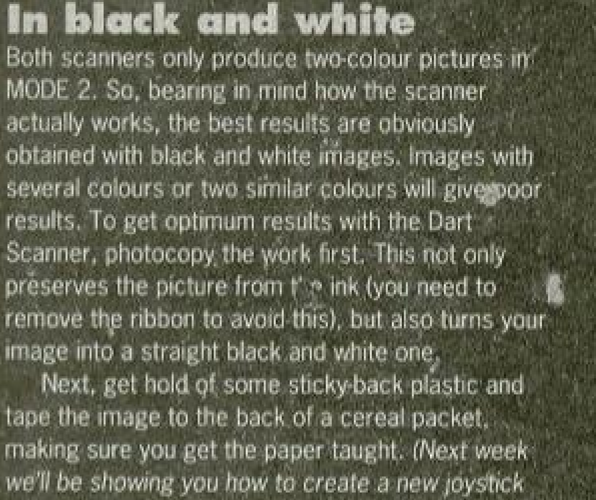
The main use of scanned images is probably for desktop publishing. Scanned screens must be loaded in as screen files, but once you have loaded them into a desktop publisher, sections of your images can be saved out as clipart for use in fanzine or leaflets.

Since the launch of Robot PD's ground-breaking *PowerPage* there have been loads of of PD DTP packages released for the CPC, each one vying for the desktop crown. In the end, though, *PowerPage* has been de-throned by its own sequel, *Powerpage 128*, which after two years of development is finally complete (look out for a review in Public Image soon).

Of course, you may already be using a 16-bit machine to produce your publications, in which case you'll need to save the image scanned on to the CPC in a common screen format that the other machine will understand. The machine code program below saves MODE 2 screens out as 32K BMP files – just insert your desired file names in line 5 and 120 and RUN it. BMP is a filename extension, standing for Bitmap. Developed by Microsoft for their Windows interface, this extension is common on the PC. And if you're using an Apple Mac, you'll be pleased to learn that there are many conversion programs that will enable you to transfer Bitmaps.

```
DBHB 1··'·Mode·2·Amstrad·to·PC·screen·convert
     er·by·R.·Wildey·1994.
HAFK 5··MODE·2:LOAD·|SCREEN.SCR|,&C000
ABHG 10·POKE·&1000,&42:POKE·&1001,&4D:POKE·&1
     002,&3E:POKE·&1003,&7D:POKE·&100E,&28
DAD[illegible] 20·POKE·&100A,&3E
CBBO 30·POKE·&1012,&80:POKE·&1013,&2:POKE·&10
     16,&90::POKE·&1017,&1:POKE·&101A,&1:POKE
     ·&101C,&1
KADH 40·POKE·&103A,&FF:POKE·&103B,&FF:POKE·&1
     03C,&FF
CAHL 50·add=&F00
CAHE 60·READ·a$
FADH 70·IF·a$=|end|·THEN·100
KAIJ 80·POKE·add,VAL(_&|+a$):add=add+1:GOTO·6
     0
CAJL 100·CALL·&F00
HANN 120·SAVE·|SCREEN.BMP|,b,&1000,32062
BALI 130·END
GAGN 140·DATA·21,CF,FF,11,3d,10,06,C8
GABL 150·DATA·0E,50,E5,C5,06,00,ED,B0
GACM 160·DATA·C1,E1,E5,C5,06,00,ED,B0
GALO 170·DATA·C1,E1,CD,29,BC,10,EB,C9
DAKC 180·DAT[illegible]end
```

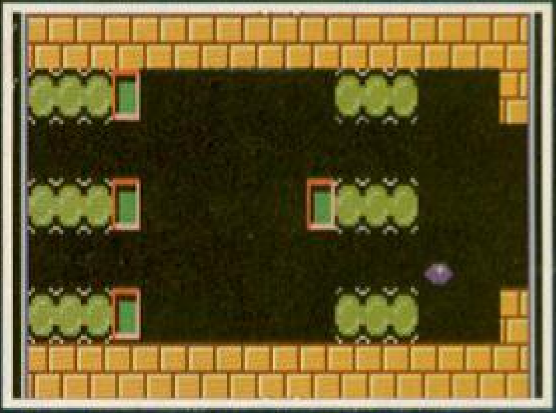
Once saved, the BMP files need to be ported over to the PC, using a program such as DOSCopy, as binary files (not ASCII). This program was used to convert the screenshots littered around the page.



The Dart's well-presented magnify mode.

Everything you always wanted to know about PD... ...but were afraid to ask!

Get a handle on the Public Domain scene. Discover the difference between PD, Shareware and Almost PD. Learn how to grab yourself armfuls of new releases for free. Check out the top 50 must-have PD programs, and uncover the history of today's PD. Richard Fairhurst is your guide...



Croco Magneto. Okay, it maybe an oldie, but it's also wonderfully addictive.

Well, did you manage to buy half the commercial software released for the CPC last year? Let's face it, it wouldn't be difficult – *Fluff* and *MegaBlasters* are both brilliant games, but they're just about all that's around at the moment. It's not surprising that people are leaving the CPC for pastures new when there's seemingly so little new stuff for the old Amstrad.

If only these disillusioned souls had got hold of even a quarter of the Public Domain software released for the CPC during the last year, though, they might have permanently postponed their move to a 16-bit machine or console. Despite constant press coverage over the past few years, the actively non-commercial nature of the Public Domain scene (when was the last time you saw a PD library advertise in *AA*?) tends to limit its appeal. And that's a shame, because these days it's the best way to get hold of new software.

Erm, what is it?

At its simplest, Public Domain programs are those which you can copy without fear of retribution. If you were to buy a copy of *Fluff*, for example, and Rob Buckley (head of Radical Software) heard that you were giving copies out to all your mates, he would be quite justified in sending the boys round.

Top 50 PD programs

If you like the sound of this free software lark, here are 50 PD and shareware programs you should be attempting to get your mitts on. With so much Public Domain software available, a comprehensive list of the best programs would be virtually impossible, but get hold of these and you won't go far wrong.

1 Digitracker

An easy-to-use and powerful utility that enables you to play sampled music intended for the Amiga on your CPC – you can even create your own. Extremely flexible, polished, and fun!

2 Breakdown

A *Breakout* game? Hardly an original concept! When it's as good as this, though, it would be churlish to complain. 25 challenging and colourful levels, an editor to create 15 more and alter the existing ones and power-ups a-plenty combine to make this possibly the most addictive PD game ever.

3 VDE

For some reason, PD word-processors are very thin on the ground,in fact, *VDE*'s the only serious contender. It runs under CP/M, so it's a bit unfriendly and occasionally unstable, but only *Protext* and *Brunword* will do anywhere near as much – and they're not free.

4 Eve of Shadows

Now best known for commercial classics like *Fluff* and *Ball-Bearing*, Rob Buckley cut his teeth with a few PD offerings: this graphical adventure is the pick of the bunch, and arguably the best adventure in the Public Domain.

5 DOS-Copy

For many serious users these days, transferring files between their CPC and 16-bit/32-bit machines is an absolute must. Andreas Stroiczek's *DOS-Copy* is the best solution for those equipped with a 3.5-inch drive. It's100% reliable, user-friendly, and quick.

6 GPaint 2

The original *GPaint* was second only to *Advanced Art Studio* in the art stakes, and its successor gives a number of options not even present on the commercial giant. The menus are in German, unfortunately, but most aspects of operation are self-explanatory.

7 B-ASIC

This program is a genuine breakthrough for Plus owners (which is pretty rare for PD software!). Serge Querne's BASIC extension enables programmers to access the hardware sprites and 4,096 colours of Amstrad's finest in their own, non-cartridge programs. Sadly under-used. (If this is your thang, check out page 19.)

8 Jumpmania

Any PD top ten has to include something from the continental arcade-puzzle game explosion of the last two years, and this is as good as any. At least it makes a change from 3D-effect demos...

9 PowerPage 128

The sole survivor of the DTP boom a few years ago, *PowerPage 128* is a fast and capable program used to produce many a CPC fanzine – *Artificial Intelligence*, *Presto News*, and *CPC Undercover* to name but three. Er, yes, well spotted, I did write it. Sorry.

10 The Demo

Still the best demo ever written on the CPC (now don't argue), Logon System's 1992



Public Domain disc fanzines cater for the more marginal of CPC interests.



What a surprise! It's a Public Domain puzzle game!



This is a screen from David Carter's gorgeous *Amiga Graphics* collection.

However, if you give someone a copy of his PD adventure, *Eve of Shadows*, he won't mind at all. PD is software out of which the programmer isn't making any money and, as such, software which isn't subject to commercial pressures.

It's a bit much to expect everyone to be quite so altruistic, though, so the concept of Shareware was born. As with PD, you can give someone a copy of a Shareware program legally, but if you like it and use it regularly, you're expected to send the programmer a small fee. This is usually in the order of £3 to £5, so you're still saving a huge amount over commercial software – there's no software house to take its cut, no adverts to pay for, no manuals to print.

A close relation of Public Domain is 'Almost PD' software. Some programmers, although they're happy for people to copy their creation among themselves, like to control who can make money out of their hard work, and so restrict distribution to 'approved' PD libraries.

PD libraries? Making money? Hang on, we're getting ahead of ourselves here...

Library cards

The concept of PD software works perfectly well with friends swapping programs among themselves. Indeed, in Europe, where the CPC scene has dwindled to a close-knit community of well-connected young programmers, artists, musicians and fanzine writers, this is largely what happens. In Britain, however, there are literally thousands of CPC users, so this approach doesn't work as well. Hence the PD library.

PD librarians are the hoarders of the CPC world. Every single PD program they hear about eventually finds its way on to one of their discs – some of them have over 200 discs of the stuff. Having compiled their library, these nice people are willing to copy any of their programs for you, if you send them a disc, a stamped addressed envelope (SAE) and a bit of money.

This is where the concept of freely available software falls down (or, at least, wobbles slightly). After all, PD librarians are entitled to charge for their hard work, the cost of collecting software from all over the world, the blank discs they store their collection on, and so on.

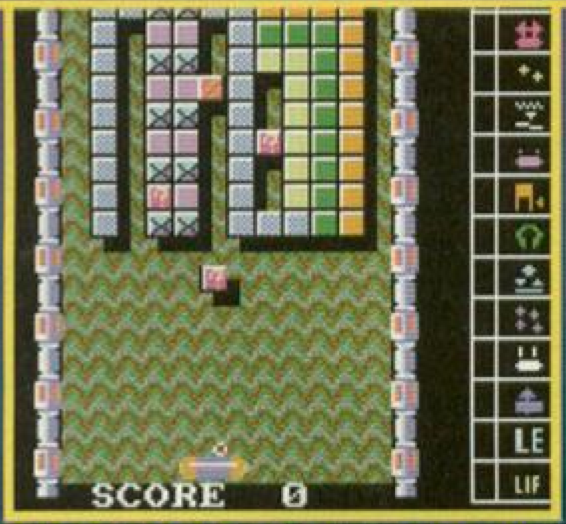
The distinction between this and profiteering is extremely fine and, needless to say, Public Domain authors aren't always too keen on other people making money from their own philanthropy – which is why 'Almost PD' is a popular system these days. With the exception of 'Almost PD' programs, though, most PD programs are available from any library you choose.

The public treasury

Having sent off an SAE for a catalogue of your selected PD library's wares, you'll often be presented with a simple list of titles. Not a very helpful aid to selecting your purchases, true, and unless you're a connoisseur of CPC fanzines, you won't have read reviews of most of them.

Assuming that everyone knows as much about the available software as they do is a mistake that the PD cognoscenti often make (PD librarians take note: there's a market out there for a lavishly illustrated, informative catalogue). So don't be afraid to write and ask for 'the PD best shoot-'em-up available', for example.

Many Public Domain programs fall into one of two categories: the clones and the uncommercial. The first category, which is particularly common with games, consists of PD programs performing almost identical functions to commercial equivalents. So if you can't find *Puzznic* in your local games shop, get hold of the Public Domain *Puzznix* instead. *Tetris* addict? There's a Polish PD version which is far better, and a lot cheaper, than Mirrorsoft's commercial release. *Print Enhancer* is the poor



Breakdown **– the best PD game ever? We reckon it could be.**



Demos, eh? Love 'em or hate 'em, you can't get away from them.

masterpiece set new standards at its time of release, and although it's been imitated many times since, no-one has come near to attaining the explosion of effects and sheer polish of the most spectacular CPC code ever. The only demo you ever need (or want).

And the best of the rest...

11	*Geno*	CP/M WIMP system
12	*PD Planner*	Spreadsheet
13	*Rambase 3*	Database
14	*Disc 'o' Magic*	Disc utility
15	*Crazy Snake*	Arcade game
16	*Rebels' Slideshow*	Art collection
17	*Printmaster*	CP/M poster layout
18	*DMon*	Disc editor
19	*Soundhakker Pro*	Music extractor
20	*Lost Phirious trilogy*	Adventure
21	*Croco Magneto*	Arcade game
22	*Newsweep*	CP/M disc utility
23	*Cheese*	Program compressor
24	*BBS Terminal*	Comms program
25	*The Ultimate Megademo*	Demo
26	*DES demo*	Commercial demo
27	*I-Spell*	Spell-checker
28	*Polish Tetris*	Tetris game
29	*Better Than Life 1*	Disc fanzine (English)
30	*Amiga Graphics*	Art collection
31	*Xtreme 2*	Disc fanzine (German)
32	*The Base*	CP/M adventure
33	*Print Enhancer*	Printer fonts utility
34	*Timebomb*	Arcade game
35	*Scrivener*	CP/M spreadsheet
36	*Robo-Cup*	Puzzle game
37	*Impact 5*	Disc fanzine (English)
38	*Desk*	WIMP system
39	*Space Froggy*	Arcade game
40	*Crystal Mission*	Arcade game
41	*Spots*	Puzzle game
42	*SQ23*	Screen compressor
43	*Puzznix*	Puzzle game
44	*Forcefield*	Arcade game
45	*Mini Print Shop*	Clip art/DTP
46	*Anti-Multiface*	Utility
47	*Logistic*	Puzzle game
48	*Crossword Compiler*	Puzzle utility
49	*Caecilia Metella*	Arcade game
50	*RC Quest*	Puzzle game

A brief history of CPC PD

The dawn of time

In the beginning, there was WACCI – the veteran user group that offered its members a comprehensive, if slightly boring, selection of CP/M PD. Yorkshire's DW Software offered two discs of home-grown and impressive PD. And that was it . Until...

February 1990

AA's Free for All column started, bringing PD to the wider attention of almost 40,000 readers (those were the days). The 'Where to go' box included just two libraries: WACCI and newcomer (since 1989) Robot PD. Unfortunately, the lack of PD software meant that reviewer Jerry Glenwright managed to squeeze about five articles out of DW's 200K of software.

August 1990

Amstrad PD was gathering pace: newcomers to the 'Where to go' box included CS/DL (now Demon) and the infamous Scull PD. Meanwhile, the first demos had hit British shores... and, in October, promptly left again after a storm over music illegally hacked from games.

December 1990

David Carter's Penguin Software, one of the most popular and well-run PD libraries ever, opened its doors to hordes of *AA* readers. *Amstrad Computer User* realised that it was missing out on something big, and started a 'PD Scene' column under the guidance of PD guru Paul Tint. Paul's first article was a glowing full-page plug for Scull PD: Paul Tint, of course, being better known as Alan Scully, Scull librarian. Nice try, lads.

July 1991

With PD becoming established as an important force in the CPC world, largely through attention-grabbing programs such as David Wild's *Desk* and David Carter's *Amiga Graphics* collection, *Dartsma PD* and Tim Blackbond's seminal *Artificial Intelligence* fanzine emerged, both to live long and glorious lives.

Indeed, the strength of the market could be seen in the fact that each issue of *AI* managed to be filled with reviews of new PD programs. Free for All had come to a less than glorious end, though, after new writer Caroline Lamb (aka Steve Williams of WACCI – what is it with PD people and pseudonyms?) decided that readers were more interested in in-depth discussions of PD copyright. The then *AA* editor Rod Lawton disagreed.

March 1992

Public Image, the PD column you've grown to know and love, started with a survey of the best PD available – although they didn't have quite as many puzzle games to choose from back then. Welsh library Sheepsoft appeared, with free copies of *VDE* for anyone who wanted them. And, after years of heckling from – and to – other libraries, Alan Scully finally gave up on the PD scene. PD wars, sadly, are almost as old as the CPC scene itself.

October 1992

Joe Moulding's excellent Sleepwalker PD revived the neglected art of PD librarians writing their own software. His efforts and the newly-released *PowerPage 128* being the only British contributions in a sea of European software. Demos, games, utilities... this was the beginning of the hey day of the European PD coder.

February 1993

The most Europhile PD library, Ireland's Amsof PD, opened to bring the eager public a selection of the very finest European puzzle games. Next was The Vault, another Irish library well-stocked with Euroware. These two libraries provided the only movement in a PD library market that had, by this point, settled down into some semblance of stability. Whereas the *AA*'s Small Ads used to be filled with new hopefuls boasting a list of ten discs of other people's software, the short life of most of these libraries seemed to have dissuaded others from following the same path.

December 1993

Continuing the Irish invasion of the UK market, Keith Woods arrived at the helm of Public Image. Meanwhile, the popular Presto PD disappeared in the Quantum fiasco, with thousands of PD discs and cartloads of 6128 Plus machines passing to the great Parcelforce depot in the sky.

May '94 and beyond...

Shock, horror, corruption, scandal! *AA*'s 'Public Inquiry' special, beginning with the immortal line, 'These PD people really do think they're God's gift, don't they?', showed up what was wrong with the PD scene – and why it would mean the death of the CPC.

It's easy to get carried away with such sensationalism, but what's certainly true is that if it weren't for Public Domain, the CPC would be in a much worse state. While the only remaining commercial support is from Rob Buckley's Radical, plus the occasional release from Sentinel and Campursoft, there's still a lot of decent quality PD out there.

The rate of release may be gradually slowing down – with European PD coders, in particular, being tempted away by the charms of the Amiga, IBM PC and Archimedes – but at least it's still a good and cheap source of new CPC software.

What's more, the freely-copyable nature of PD means libraries have 'infinite stocks' of all their programs – *Prince of Persia* is impossible to get hold of these days, but if you're looking for an old game like *Croco Magneto*, you can guarantee it'll be on sale at a PD library near you.

---

man's *Pro-Print*. And budding musicians could fork out £25 for *Soundtrakker*, but when the superior *Digitracker* (and soon *ChaRleyTraCker*) are available from PD libraries, you might as well save the money.

There again, there are some PD programs that just won't sell. No-one's going to pay for a simple, if fast, disc copier when *Xexor* copies discs, hacks them to pieces, generates new formats, solves Fermat's Last Theorem, and so on. So people don't – they just get hold of *Disc 'o' Magic*. A hacking program like *Soundhakker Pro* is of relatively minor interest, so instead of making maybe £10 by selling two copies, the programmer may just as well justify the effort of writing it by making it available to anyone who wants a copy.

Special interest programs of this type make up a large part of the Public Domain. The most extreme example is the demo. This is nothing but a lot of flashy effects on the screen, and usually a message from the programmer to his friends. They're not of much interest to the average CPC user, but they're not intended to be – PD authors don't have to worry about such things. Similarly, *AA* would go bust overnight if it started printing long articles on the finer points of programming the CPC's chips, eccentric stories, and gossip about exactly what programmers are up to at the moment. PD disc fanzines like *Xtreme* and *Impact*, on the other hand, can't go bust – they do it for love alone.

There are some programs you won't find in the Public Domain: huge, involved projects like *Fluff* and *RoutePlanner* are firmly anchored in the commercial arena. Innovation isn't a feature of PD software, and perhaps this is why it can never replace commercial software in ensuring the survival of the CPC.

Just do it!

But no-one's ever expected the Amstrad CPCs to go on for ever. After all, in ten years time, there won't be any Amigas, Mega Drives or Super Nintendos around, either. What matters is that right now you can get a lot more use and fun out of your old CPC than the number of commercial releases would suggest.

You've read Public Image every month. You've read this special. You've played with the excellent Public Domain software we've offered you on the covertape. You know what the Public Domain scene can offer you, yet there are thousands of *AA* readers out there, and only a few have ever tried PD libraries. Why? Don't miss out.

Where to go!

Most PD libraries are happy to send you a catalogue of their wares if you send them an SAE. They're generally part-time enterprises, so don't expect credit card facilities, helplines or flashy packaging. Service is generally quite friendly and helpful, though.

- **Demon PD**
  42 Overton Close, Hall Green, Birmingham B28 9NA
- **Penguin Software**
  62 Nursery Road, Knaphill, Woking, Surrey GU21 2NW.
- **Robot PD**
  2 Trent Road, Oakham, Rutland LE15 6HF
- **Sheepsoft**
  298c Holton Road, Barry, South Wales CF6 6HW
- **Sleepwalker PD**
  9 Meeting House Lane, Balsall Common, W Midlands CV7 7FX
- **WACCI**
  7 Brunswood Green, Hawarden, Deeside, Clwyd CH5 3JA

The Examiner

After two months of chasing princesses, chatting to dragons and marrying goblins, Debbie Howard, Queen of the Adventurers, returns to hold court once more. Approach and be recognised...

The Bounty Hunter

Price: Tape £2; Disc £4 (disc version is CP/M+ and CP/M 2.2)
Distributor: The Adventure Workshop, 36 Grasemere Road, Royton, Oldham, Lancashire, OL2 6SR.
Orders payable to: PM Reynolds.

REVIEW

While sanctioned by the War Federation, Dr Froglen recently broke new ground in the development of neuro-viral life forms. 22 such forms were grown in the laboratory and were being transported in a blipship, under controlled conditions, to Federation Headquarters. The ship never arrived, however, and is now believed to have crashed on the fifth planet of Zeta 23. Having been issued with a Viroid-molecule-destroying Pulsar, your mission is to wipe out these 22 deadly life forms. And so, clutching your high-tech weapon in one hand and a tricorder in the other (well, you never know when you're going to get stranded in a polystyrene cave), you beam down to the planet's surface....

Fans of the old Speccy may well find this plot somewhat familiar, because the game was originally released on the Sinclair. Since then it has undergone the conversion treatment at the hands of the Adventure Workshop.

The Bounty Hunter is a massive text-only adventure with around 135 locations. Unfortunately, most of the location exits are never mentioned, so it's a case of trying each direction to discover which way is best. And don't bother entering L for look, either, because you have to type in the whole word. Apart from that, the game is simply a case of trecking around and shooting every Viroid you come across, until you've destroyed all 22 of them.

The adventure is okay in itself, with plenty of puzzles to keep you busy, but it just doesn't have that all-important grab factor. Most of the time the only message you get for performing a correct action is 'okay!', instead of the friendlier-style 'You undo the wrapping to reveal a box of chocolates'. (That's just an example, by the way, so don't go around looking for any choccies, will you?).



Somehow, I don't think Han Solo would be in favour of trying 'a little tenderness' with this Bounty Hunter.

The Bounty Hunter will appeal to some, but not all. There's plenty here to keep your brain (and fingers) active, but if you're after a polished adventure where everything is done for you, you better keep looking!

69%

LORDS & LADIES OF ADVENTURE

If you're stuck in a game listed below, these kind souls are willing to help you. Please remember to enclose an SAE with your enquiry and DON'T ask for a full solution, as you might be disappointed. If you want to become a lord or lady please write with your full list to: Lords and Ladies of Adventure, *Amstrad Action*, 30 Monmouth Street, Bath, BA1 2BW.

- ***Five On A Treasure Island*** – **Tommy MacDonald, 7 County Cottages, Piperhill, Nairn.**
- ***Adult II, Bew Bews, Blue Raider II, Can I Cheat Death? Doomlords I-III, Dick-Ed, Escape From The Planet Of Doom, Firestone, Jason And The Argonauts, Lords Of Time, Nite-Time, Red Moon, Spaced-Out, Welladay, Yawn*** – **Paul White, 18 Conifer Road, Coxford, Southampton, Hampshire, SO1 6FX.**
- ***Shard Of Inovar, Five On A Treasure Island, Holiday II, Mell, Hobbit, Lords Of The Rings, Shadows Of Mordor,*** **all Dizzy Games – Andrew Hughes, 12 Colliers Close, Woodhouse, Sheffield, S. Yorks, SY3 7DE.**
- ***Boggit, Big Sleaze, Forest At Worlds End*** – **Bernard O'Leary, Lotamore, Glanmire, Co. Cork, Eire.**

Clued up!

Tealand

The following is a list of some of the items found in the game and, more importantly, what you do with 'em...

Address Book	Read it to get the phone number.
Big Sid	Will bore you to tears before eating one doughnut too many. He leaves you a diary.
Bottle Of Blue	Comes to you in a dream. Open the bottle and drink it for the smurf's undivided attention.
Box	It's on Wiggin's back. Put the coin in it before entering the maze; if you don't, the game can't be completed.
Brick	Get it to reveal something!
Clock	It's in the town square. Set the clock to prompt the van.
Coin	Use it in the telephone box in the maze.
Deaf Man	Gives you a tenner for his cat, as well as a cure for the green rub disease.
Diary	Tells you the time the ice-cream van will arrive.
Diving Suit	Wear it, then dive in location one and move west.
Fiver	Use it to buy the smurf an ice-cream.
Gnome	Wanders through locations at random. If he steals something from you, pinch it back. He also takes things from other rooms, so if he's stolen something you need, follow him.
Goblin	A mysterious figure, pays you 10p for some tea.
Green Rub	Rub green for a lot of laughs, then get cured.
Orange	Eat it.
Pendant	This is inscribed 'SAY WIGGINS'. Do that, and the dog will always find you.
Rusty Key	Used to open the gates near the town square.
Sock	Let the gnome steal it – he may find it of more use than you.
Teabag	Use it with the teacup to make tea.
Tenner	This is your taxi fare (must an inner-London cabbie).
Tree	Climb it.
Wig	Wear it, sooner or later the womble will arrive.

Them there verbs

Buy, climb, cure, dial, dive, drink, drop, east, eat, follow, get, give, grab, inventory, kill, load, look, make, north, offer, open, pat, pay, pick, put, read, remove, rest, rub, save, say, set, sleep, south, steal, stroke, surface, swallow, swig, take, tell, toss, turn, unlock, wake, wear, west.

Assembly line

One of the things we are constantly being quizzed on here at *Amstrad Action* is effective sprite routines. So, expect hearty rejoicing on the nation's streets this month as Rob Buckley reveals the machine code of success...

This month we dip our toes into the cool, relaxing pool that is sprite routines. Sprites, for the uninitiated, are the graphic characters like Rick Dangerous that move around the screen, without destroying either the background or other sprites over which they pass. The programming behind this may sound rather easy, but in actual fact it has become a bit of a science over the years.

Lots of games have cheated by using XOR routines, or by making backgrounds a single colour, but the routine in this article is a true sprite routine. This means your sprites can be transparent, and even overlap with other sprites without any difficulty or flicker. There is, however, a price to pay for this, and that is speed and size.

The first problem when printing sprites is restoring the background after the sprite has moved. Many routines do this by storing the background as the sprite is pasted on to the screen. The trouble with this approach is that if two sprites pass one another, the sprite and background data become merged.

The easiest way around this is to store the background screen before moving the sprites, but that gobbles up 16K before you even start. The screen-store program in listing one holds a full screen at &6600, and should only be executed when no sprites are on the screen. To use it: CALL &6000

Most sprite routines print the sprite to screen as soon as requested. This routine, however, stores the data given to it in table, and then displays all the sprites in one go when an order to update the screen is issued. Any number of sprites from one up can be displayed, though each takes nine bytes in the sprite table. The sprites (Listing two) are issued by: CALL &6029,(sprite number),(Address),(x),(y),(width),(height)

Now comes the really clever bit: the screen update routine. This works by doing each pixel line in turn from 0 – 199. First we reprint the background line on to the screen, and then we check to see in any of the sprites are on that line.

For each sprite, the first byte of its data table is taken with the status byte. This byte tells us whether the sprite is 0 (not being drawn), 1 (being drawn) or 2 (completed). A value of 3 in the status byte represents the last sprite, and then we move on to the next horizontal line.

Three spritely routines

Routine 1

```
           ORG &6000
SCRST:     EQU &6600
           LD DE,SCRST
           LD HL,&C000
           LD A,199
           LD (ST),HL
           LD (Y),A
LINE:      LD BC,80
           LDIR
           LD HL,(ST)
           CALL &BC26
           LD (ST),HL
           LD A,(Y)
           DEC A
           LD (Y),A
           CP 0
           JP NZ,LINE
           RET
```

Routine 2

```
SPRITE:    LD
A,(IX+10)
           LD B,A
           LD DE,9
           LD
IY,SPTAB-9
LOOP1:     ADD IY,DE
           DJNZ LOOP1
           LD A,(IX+0)
           LD (IY+9),A
           LD (IY+2),A
           LD A,(IX+2)
           LD (IY+6),A
           LD A,(IX+4)
           LD (IY+1),A
           LD A,(IX+6)
           LD (IY+5),A
           LD E,(IX+8)
           LD D,(IX+9)
           LD (IY+3),E
           LD (IY+4),D
           LD (IY+7),E
           LD (IY+8),D
           RET
```

Routine 3

```
UPDATE:    LD HL,&C000
           LD A,0
           LD (Y),A
           LD DE,SCRST
           LD (SCR),DE
           LD
(SCRCOORD),HL
NEWLINE:   LD
DE,(SCRCOORD)
           LD HL,(SCR)
           LD BC,80
           LDIR
           LD (SCR),HL
           LD
HL,SPTAB-9
CHECK1:    LD DE,9
CHECK2:    ADD HL,DE
           LD A,(HL)
           CP 3
           JP Z,NEXT
           CP 2
           JP Z,CHECK1
           CP 1
           JP Z,PRT
           INC HL
           LD A,(HL)
           DEC HL
           LD B,A
           LD A,(Y)
           CP B
           JP
NZ,CHECK2
           LD A,1
           LD (HL),A
           JP CHECK2
PRT:       LD (ST),HL
           EX DE,HL
           INC DE
           INC DE
           LD A,(DE)
           DEC A
           LD (DE),A
           CP 0
           JP
Z,FINISH2
           INC DE
           LD A,(DE)
           LD L,A
           INC DE
           LD A,(DE)
           LD H,A
           INC DE
           LD (ADR),HL
           LD A,(DE)
           LD C,A
           LD B,0
           INC DE
           LD A,(DE)
           LD
HL,(SCRCOORD)
           ADD HL,BC
           LD DE,(ADR)
           LD B,A
DRWSP:     LD A,(DE)
           CP 0
           JP Z,SKIP
           LD (HL),A
SKIP:      INC DE
           INC HL
           DJNZ DRWSP
FINISHED:  LD HL,(ST)
           INC HL
           INC HL
           INC HL
           LD (HL),E
           INC HL
           LD (HL),D
           LD HL,(ST)
           JP CHECK1
FINISH2:   LD HL,(ST)
           LD A,2
           LD (HL),A
           JP CHECK1
NEXT:      LD A,(Y)
           INC A
           LD (Y),A
           CP 200
           JP Z,END
           LD
HL,(SCRCOORD)
           CALL &BC26
           LD
(SCRCOORD),HL
           JP NEWLINE
END:       LD BC,9
           LD IY,SPTAB
END2:      LD A,(IY+0)
           CP 3
           RET Z
           LD A,(IY+7)
           LD (IY+3),A
           LD A,(IY+8)
           LD (IY+4),A
           LD A,(IY+9)
           LD (IY+2),A
           LD A,0
           LD (IY+0),A
           ADD IY,BC
           JP END2
Y:         DB 1
SCR:       DS 2
SCRCOORD:  DS 2
ST:        DS 2
ADR:       DS 2
SPTAB:     DS 18
           DB
3,3,3,3,3,3,3,3,3
```

Once we reach the bottom of the screen all the sprite tables are updated for the next display. To call the Update screen process just: CALL &6066

There are a few things that need to be set up before this routine will work properly, which I have omitted from the routine for reasons of space. First, each sprite must be defined before updating the screen (you only need to do this once for each sprite, though).

If you wish to turn a sprite Off then make its (y) value equal to 201 – this effectively moves it off the screen.

To increase or decrease the number of sprites alter the number in: SPTAB : DS 18
(This represents two sprites 2*9)

The number should be number of sprites * 9

Cheat mode

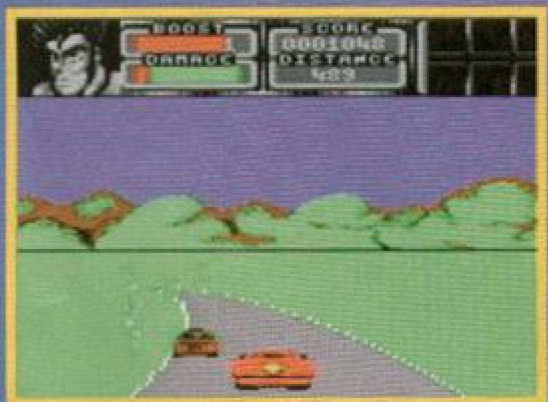
A new year and a whole host of new cheats. Lee Rouanne searches out the Alka Seltzer and goes plink, plink, fizzing his way through this month's assortment of gaming gems.

Crazy Cars 3

Right, we kick off this month – nay this year – with a quite stupendous cheat *(One of yours then, Lee? – Karen)* for *AA110*'s covertape cracker *Crazy Cars 3*. But before we get into the listing here's a multiface poke for the same...

2359,00 Infinite Boost

```
GACO  100·"Crazy·Cars·3·Cheat
FAEF  110·"By·Lee·Rouane
GAND  120·"Infinite·Boost
AALN  130·"
IABN  140·DATA·CD,65,BC,3E,01,CD,6B,BC,21,74,BF
IADI  150·DATA·CD,26,BF,C3,6C,BF,00,11,70,01,21
IAJN  160·DATA·87,A6,0E,07,CD,CE,BC,21,80,BF,CD
IANI  170·DATA·26,BF,C3,6C,BF,11,70,01,06,0C,D5
JACB  180·DATA·CD,77,BC,E1,CD,83,BC,CD,7A,BC,C9
IAGN  190·DATA·CD,65,BC,3E,01,CD,6B,BC,21,74,BF
IAKG  200·DATA·CD,26,BF,11,70,01,21,87,A6,0E,07
IAKJ  210·DATA·CD,CE,BC,06,0C,21,80,BF,11,00,C0
IACG  220·DATA·CD,8C,BC,21,70,01,11,E0,92,01,70
IABM  230·DATA·01,3E,02,CD,98,BC,CD,8F,BC,3E,00
IAOB  240·DATA·32,A4,24,C3,70,01,43,43,33,20,20
IAMC  250·DATA·20,20,20,2E,42,49,4E,43,43,41,52
IAPB  260·DATA·53,33,20,20,2E,42,49,4E,00,00,00
CAEN  270·DATA·LCR
EAKF  280·chk=0:x=&BF00
JAME  290·READ·a$:IF·a$=|LCR|·THEN·320·ELSE·300
GANC  300·a=VAL(_&|+a$):POKE·x,a
HAKN  310·x=x+1:chk=chk+a:GOTO·290
HAKH  320·IF·chk()&39E0·THEN·GOTO·520
JABI  330·CLS:MODE·1:WINDOW·#2,1,39,1,5:INK·
1,24
IANA  340·WINDOW·#1,1,39,6,24:CLS·#1:CLS·#2
IAEJ  350·BORDER·0:INK·0,0:INK·2,18:INK·3,17
GANF  360·PRINT·#2,STRING$(38,210)
OAOD  370·PRINT·#2,TAB(5)|Crazy·Cars·3·Cheat·&
·Transfer|
GAPH  380·PRINT·#2,STRING$(38,210)·
EAIL  390·PRINT#1:PRINT#1
LAJA  400·PRINT·#1,|1.·Transfer·Game·To·Disc|
KALD  410·PRINT·#1,|2.·Tape·Cheat·Version|
NAGM  420·PRINT·#1,|3.·Disc·Cheat·(Once·
Transferred)|
KAPL  430·a=0:WHILE·a=0:a$=INKEY$:a=VAL(a$):
WEND
FAJL  440·ON·a·GOSUB·460,480,500
CAIK  450·GOTO·330
ABNP  460·CLS#1:PRINT#1,TAB(2)|Insert·Tape·And·
Disc·With·37K·Free|
BBJN  470·PRINT#1,TAB(10)|Then·Press·Any·Key|:
CALL·&BB18:|TAPE:CALL·&BF37
ABPA  480·CLS#1:PRINT#1,TAB(6)|Insert·Tape·
Rewound·To·Start|
BBCN  490·PRINT#1,TAB(11)|Then·Press·Any·Key|:
CALL·&BB18:|TAPE:CALL·&BF00
OAFO  500·CLS#1:PRINT#1,TAB(7)|Insert·Disc·
With·CCARS3·On|·····
PANO  510·PRINT#1,TAB(10)|Then·Press·Any·Key|:
CALL·&BB18:CALL·&BF12
LAID  520·PRINT·|Data·Error·Old·Bean·.....|:END
```



And if you want to transfer *Crazy Cars 3* to disc, turn to page 21.

Super Cauldron

Next up is a rather brilliant guide to level one of that super platformer, *Super Cauldron*. Join me in a round of applause for Adrian Lybaek from Delta in Canada.

As soon as you start on level one, go to the left, get the broomstick and go flying. Look for a pattern of stars in the shape of a cross and go to the point where they intersect. You'll find the circular saw spell there.

After that, go to the left and, just before you enter the forest, bend down at the tree stump. You will enter a secret world. Now keep flying to the right and you will eventually find a broomstick. Fly immediately to the left and go up. You'll find the teleportation spell there.

Don't feed the plants

Once you've left this world, go into the forest and bend down at the first tree stump. You should end up in a forest world of springs and some very hungry-looking plants! Use the springs to jump over them; shooting them with stones will also do the job. Get to the end and you'll be rewarded with the fireball spell.

When you re-emerge into the forest, go left and find the tree stump that leads to a fire world. Go there and keep going right (avoiding the fire and snakes). When you find the snake on the tree stump, use your circular saw to damage him. Then jump up and, when you're at a 45 degree angle, fire at the snake to finish him off.



Follow our bewitching guide and bust level one of *Super Cauldron* wide open.

The Manic Multipoke Mania Zone

Winding up this month's marvellous Cheat Mode is my good mate Carl Thomas. He proves yet again that finding multiface pokes isn't all that boring! No really!

Tell you what, why don't you give it a go and send in your results to us here at Cheat Mode, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. We promise to love forever... At least, we will if it works!

Game Name	Media	Addr, Poke	Effect
Classic Muncher	(T/D)	05CD,xx	xx=Num Of Ghosts (1-4)
		047B,xx	xx=Num Of Deady Ghosts (1-4)
		05CB,C9	Removes Ghosts
		0471,C9	All Ghosts Harmless
		0459,C9	Trap Ghosts In Box
		0D98,C9	Speeds Up Game
Space Harrier	(T/D)	128F,C9	Manual Rapid Fire
		10FC,C9	Aliens Self Destruct
		10FC,19	Resets Last Poke
Puzznic	(T)	599C,00]	Infinite Time
		599D,00]	Do Both Pokes
Guardian 2	(T/D)	70B6,00	Removes Raiders & Mutants
		A387,00	Infinite Cloak

You should now be able to see land at the right-hand edge of the screen (if you can't, jump to the right and then back on to the tree stump. This will cause the screen to scroll). Use your teleport at full power to get to dry land, then keep using it to avoid the fire. You'll pick up the bomb spell here.

Bridge over troubled waters?
Now, when you reach the bridge over the water, bend down twice and you should re-emerge into another room. Find what appears to be a sealed-off room and chuck a few bombs to open it. Get the key and travel to the exit by going right and up.

Carefully head to the right until you find another tree stump. Bend down and kill all the bouncy things. Top up as many of your spells as possible by using the frogs that are left. Go down and use your teleportation to avoid the spikes. Head down again and do the same to avoid the other spikes. Continue down and, using your bombs, blow up the bouncy things and the floor.

Go down once again and you'll come across more nasty spikes. Clear them with the teleport, but don't move another step! Walk just far enough to cause the stalactite to fall and then switch to the fireball spell. Go down, but just as you do, go right and keep going to the right. You should land on a platform from which you can fire away at the enemy. Once he's dead, head down and blow away the floor underneath you. Keep going down until you reach a chain rope. Climb down this and kill the hungry flora with your circular saw.

When you get to the bottom, kill the bouncy things on the opposite side of the wall with your fireball. Go down again and switch to the teleport spell. Jump up at the other side of the wall and release the teleport spell. With any luck, you'll end up where you want to be *(What? Between the sheets with Christopher Lambert? Swoon! – Karen)*. Go up, avoiding the falling obstacles, and enter the door. Kill the wimpy end-of-level guardian (with the circular saw), blow away the wall, get the book and – ta-da! – level one is over.

Apprentice

Once again, Michelle Tomlinson fom Andover in Hants helps long-suffering gamers by solving a perplexing puzzle in *Apprentice*.

If you travel down two screens, you'll find a green crocodile thing patrolling across the bottom of the screen. Go to the left-hand side of the screen by the yellow rock and push the joystick upwards. You will find a secret passage in the wall. Make your way to the funny-coloured-looking square in the the middle of the yellow rock and pick it up.

You should find a painting, which is one of the special objects you need to give to one of the wizards. There are many other secret passages like this, but they're not all hidden behind yellow rocks. So the message is keep experimenting...

Strider

On the Title screen, press Z and 0 (zero) together – the border will flash. Start the game as normal, then if things are getting too tricky, press H to pause the action and SHIFT and 1 to skip to the next stage. Don't try this on the end-of-level guardians though, because the game will crash.

If you want to try the same stage again, simply hit SHIFT and 0 and you'll restart your current level with the same amount of time and lives.

Turbo Chopper Simulator

Pause the game by pressing CTRL, then to enter the cheat mode press the M, B and 1 keys simultaneously. If the cheat's worked you should find yourself the proud owner of a nearly new set of infinite lives. And as though that weren't enough, from now on you can also skip your current level by pressing CTRL followed by ESC. Good, eh?

Indianna Jones and the Last Crusade

Press T, O and D simultaneously on the Title screen to switch this cheat on and off. Then, when the action starts, press SHIFT and 1 to return to the start of your current level, SHIFT and 2 to advance to the next restart point and SHIFT and 3 to go to the next stage. Henry Jones Snr would be proud!



He's named after a dog, you know.

Typing Listings

If you've never typed in a listing from *AA* before, then reading the following blurb is a REALLY GOOD IDEA. Trust us, it'll save you no end of hassle.

- **Basically, all you need to do is make sure you type in exactly what we print EXCEPT the first four letters in each line.**
- **The first four letters are a code which work in conjunction with our unique and utterly excellent *TypeChecker* program below.**
- **Only press RETURN when you get to the end of a command line. If a command line goes on to two lines do not press RETURN at the break in the line. Your lines on screen should break in exactly the same place as they do in the mag.**
- **The dots you see in some lines (like the one between 'well' and 'done' in the line `PRINT|Well·done|`) indicate spaces. The dots are there so that you don't have to guess how many spaces to put in when there is more than one.**

TypeChecker

This program enables you to check whether you've typed *AA* listings in correctly. Type it in, then SAVE it for future use. When you want to double check that you typed a listing in correctly:

- **Load up *TypeChecker*.**
- **Type NEW.**
- **Type in the listing of your choice.**
- **When you've finished type LIST.**
- **At the end of every line a highlighted code will appear. It should be the same as the code printed in front of the same line in *AA*. If it isn't you have typed that line incorrectly.**

```
PAML 10·'·TypeChecker·V1.0·-·By·Simon·Forrest
     er·-·Dec·1992
MAOJ 20·'·For·Amstrad·Action·-·Public·Domain
DAMK 30·MEMORY·&3FFF
CAJK 40·csum=0
GAME 50·FOR·addr=&A000·TO·&A05B
DAKJ 60·READ·byte$
GAJB 70·byte=VAL(|&|+byte$)
FACF 80·POKE·addr,byte
GAFB 90·csum=csum+byte
DALK 100·NEXT·addr
OACI 110·IF·csum<>&2ADD·THEN·PRINT·|Checksum·
     Error|:END
LAHE 115·POKE·&A001,PEEK·(&BB5B):POKE·&A002,P
     EEK·(&BB5C)
KAHI 120·POKE·&BB5A,&C3:POKE·&BB5B,&3:POKE·&B
     B5C,&A0
MACN 130·PRINT·|TypeChecker·V1.0·Installed|:E
     ND
MABC 140·DATA·CF,FE,93,FE,0A,C8,00,A0,F5,C5,D
     5,E5,FE,0D,CA,22
LACJ 150·DATA·A0,5F,16,00,2A,5A,A0,19,22,5A,A
     0,E1,D1,C1,F1,C3
LAFJ 160·DATA·00,A0,3E,20,CD,00,A0,3E,10,CD,0
     0,A0,2A,5A,A0,7C
LADI 170·DATA·CD,45,A0,7D,CD,45,A0,3E,10,CD,0
     0,A0,21,00,00,22
LACN 180·DATA·5A,A0,C3,1B,A0,F5,E6,0F,C6,41,C
     D,00,A0,F1,E6,F0
KAJC 190·DATA·1F,1F,1F,1F,C6,41,CD,00,A0,C9,0
     0,00,END
```

Turning TypeChecker off (it is automatically initialised when you RUN the program above) and back on again is quite simple:

`POKE &BB5B,0` **To turn it off**

`POKE &BB5B,3` **To turn it back on again**

Isn't science amazing? (Now don't argue.)

How to use Multiface Pokes

The (T)s and (D)s before the address indicate whether the poke was written for a tape or disk game (they might work on both, though, it's worth a try). Just in case you don't already know how to put in these BLACK BOX POKES, here are the steps to success.

1. **Load the game as normal.**
2. **Press the RED button on the MULTIFACE.**
3. **Press "T" for tool.**
4. **Press "*" to make sure you select the code.**
5. **Press "H" for HEXADECIMAL input.**
6. **Press "SPACE" for input.**
7. **Type in the ADDRESS (4 characters ie. 3A7C)**
8. **Type in the POKE (two characters ie. A7)**
9. **Press "RETURN"**
10. **If there is more than one poke goto (F)**
11. **Press "ESC" back to the menu.**
12. **Press "R" to return to the game.**

Getting the most out of your Plus

Let's face it, if you've got a Plus you want to use it to its full potential, right? After all, who wants 27 colours when you can have 4,096? And what about those hardware sprites? Keith Woods reveals how to make the most of your Plus.

When Amstrad first launched the Plus series of machines back in 1990 it swore blind that the enhanced capabilities of the new systems, such as the 4,000-odd colours and harware sprites, could only be used by cartridge software.

Of course, nobody believed Amstrad and it wasn't very long before Serge Querne came up with his BASIC extension (see the feature on page 12) and the French Logon team had found a way of unleashing the Plus's exciting new capabilities. But they were coding geniuses, weren't they? The power of the Plus is still well beyond the ability of the novice, isn't it?

No, far from it! Accessing the Plus's hardware is remarkably simple. In fact, it's even possible to do it from BASIC, and if you read on, you'll find out exactly how it's done.

Cracking the Code

The Plus's special features are protected by a 'secret' code, which you need to enter before you can use them. It's as though the new part of the Plus's harware has been locked in a safe. The first thing we need to do is enter the combination to open the door.

Listing 1 on page 20 does just that. Running the listing doesn't actually put you in 'Plus mode' though, because you need to type the command OUT &7F00,&B8 to get access. (Typing OUT &7F00,&A0 returns you to ordinary CPC mode.)

Once you're in Plus mode, a block of memory is opened that contains all the details of the Plus's enhanced features. This block lies between &4000 and &7FFF. Using many of the Plus's features is as simple as poking changes in the information that is stored there.

Over the Rainbow

The easiest new feature to use is the Plus's 4,096 colours (a great improvement on the ordinary CPC's 27). Before we see how to choose the new colours, it's important to understand how they're arranged.

As with just about every number associated with computers, 4,096 is a multiple of 16. The reason for this is that computers use hexidecimal (hex) numbers as opposed to the decimal (dec) numbers that us mere mortals are used to. Hex numbers go up to 15 before adding a second digit, as can be seen from the following table, which compares hex numbers with their decimal equivalent.

Hex	Dec	Hex	Dec
0	0	8	8
1	1	9	9
2	2	A	10
3	3	B	11
4	4	C	12
5	5	D	13
6	6	E	14
7	7	F	15

As you can see, including 0, there are 16 single digit hex numbers.

All the Plus's 4,096 colours are based on combinations of the three primary colours – red, blue and green. So to choose one of the 4,096 colours you must enter three values – one for each primary colour.

Yes, you've guessed it, you can enter one of 16 possible values for each of the three primary colours by using the hex numbers 0-F. As there are a total of 4,096 different combinations (16x16x16=4096), any of the Plus's colours can be selected using this method. It's just like mixing paints in art class.

So how's it done?

So, now you know how the Plus's colours are selected, how do you go about doing it?

Are you in Plus mode? Good. You will remember that the memory containing the special Plus information is now available for you to play with. Part of it, between &6400 and &6421, contains the data for pen and border colours.

The data for each pen colour takes up two bytes. Thus the data for PEN 0 is stored at addresses &6400 and &6401, PEN 1 at &6402 and &6403 and so on right up to PEN 15 at &641E and &641F. The border colour data takes up the last two bytes, &6420 and &6421.

The two bytes allocated to each PEN hold the RBG (Red, Blue, Green) values of the PEN. Each byte can hold a two-digit hex number. Therefore, the first byte of each pen holds the red and blue values, while the second byte holds just the green value.

So, if you want to change a pen colour to the colour represented by the RBG values 8, A and C, you need to change the pen's two bytes to 8A and 0C. If you want to change PEN 0, whose colour data is held at &6400 and

Spriting Irish

If all this is far too simple for you, you might find it more interesting to play with the Plus's hardware sprites. Again, as with the colours, the sprite information is all stored very logically and is easily tampered with. Let's look briefly at where it all is, and how it's structured.

The graphics data of the 16 sprites is held between &4000 and &4FFF. It's held in blocks of &100, one for each of the 16 sprites. Therefore Sprite 0's data is at &4000-&40FF, Sprite 1's at &4100-&41FF and so on. Each byte is a pixel and can be filled with a value from 0-F (as with the colours). The value represents the pen colour of the pixel.

Information regarding the position and size of the sprites is held between &6000 and &607F. Each sprite's data takes up eight bytes, so Sprite 0's data is held at &6000-&6007, sprite 1's at &6008-&600F and so on. The first two bytes hold the X position in pixels (0-&27F, 640 pixels – the width of a standard MODE 2 screen). The third byte holds the Y value (0-&C7, 200 pixels). The fourth, fifth and sixth bytes are empty. Bytes seven and eight hold the width and length of the sprites respectively. This info is in binary. There are four sizes, entered as 00, 01, 10 and 11.

Addresses &6422 to &643F hold the hardware sprites pen colours data. This information is organised and entered in the same way as the ordinary pen colours data.



Make the most of your Plus – stick it in a dinner suit and a diamond-pinned, silk cravat!

Listing 1

```
LANO 10·FOR·a=1·TO·17:READ·a$:OUT·&BC00,VAL(_
     "&"+a$):NEXT
MAMB 20·DATA·FF,0,FF,77,B3,51,A8,D4,62,39,9C,
     46,2B,15,8A,CD,EE
```

&6401, you'd need to type:
POKE·&6400,&8A:POKE·&6401,&C
(Note that when typing hex numbers it is necessary to put an ampersand [&] in front of them.)

A Flashy Effect?

If you've just typed in the above example, you'll have noticed that all that happens is that the background flashes once. It's here that we encounter a slight problem. In order for one of the Plus colours to be maintained on screen, you need to use an interrupt.

Fortunately, you won't have to worry about setting one up, though. The Plus's designers kindly included a hardware interrupt for this very purpose. To turn it on, type:
POKE·&6800,1
To turn it off, type:
POKE·&6800,0

Now try typing in the line that caused the flash last time. As you can see, the interrupt has given you a light blue background. Now we're really getting somewhere – this is a colour that isn't present on ordinary CPCs!

It's not all good, though. As you no doubt realised, the keyboard wasn't as responsive the second time you entered the two POKEs. This is because the interrupt slows many things down, including the speed at which your computer scans the keyboard to see if a key's being pressed. 6128 owners will also find discs take much longer to load.

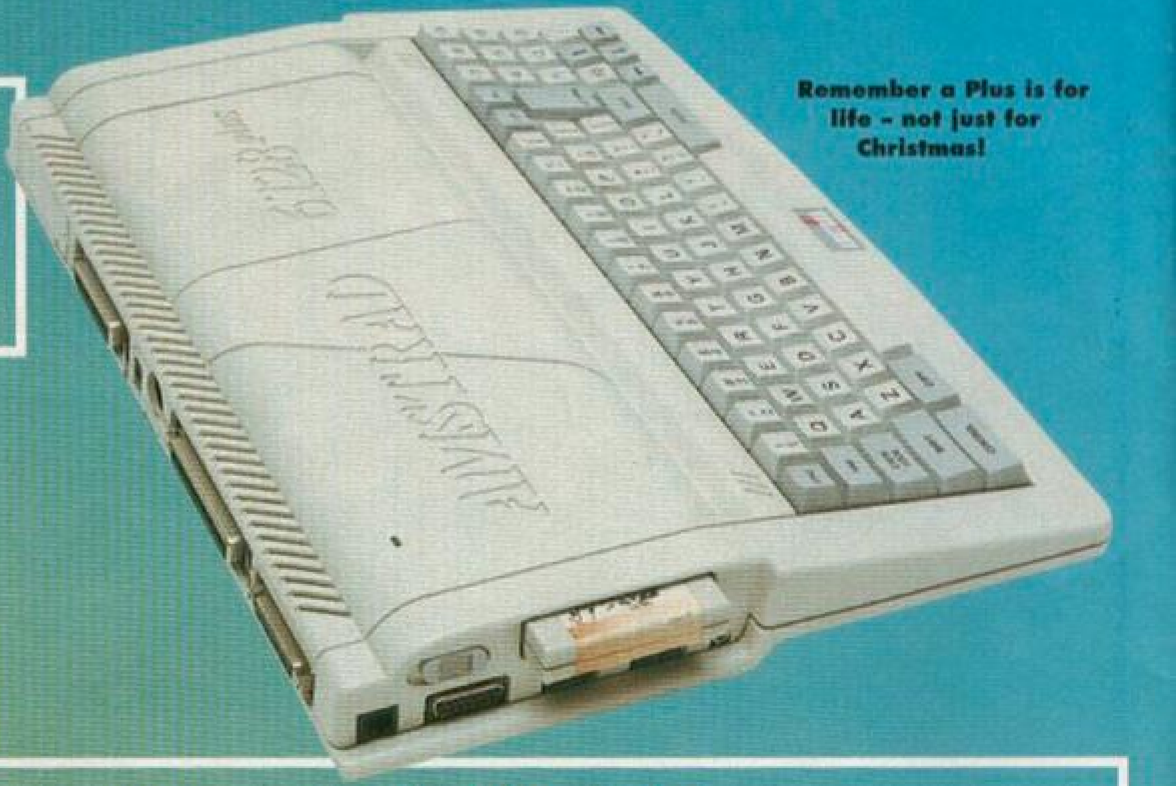
This problem can be overcome using the SPEED KEY command. This changes the speed at which the keyboard is read. When using the interrupt, type: **SPEED·KEY·3,1**
Okay, the keyboard still doesn't respond normally, but it's a big improvement over the post-POKE rate, right? And you can tweak this rate still further by changing the two numbers, 3 and 1, to find the speed that you like best. When you turn off the interrupt, type: **SPEED·KEY·30,2** to return the keyboard to normal.

So there you have it

You should now have all the information you need to use the Plus's 4,096 colours in your own programs. If you're confused or you want to find the colour of your choice quickly, why not type in and run Listing 2, which is a handy colour selection program.

This program works by asking you to choose a pen number (0-15) or the border. You can then press R G and B to change the respective Red Green and Blue values. When you've chosen your colour press Q and you'll recieve two POKEs. These can be entered into the Plus mode to change the pen to that colour.

The colour selection program detailed here is very simplistic, but if you're feeling adventurous you can change it to include your own features. For instance, it should be possible to choose pens within the program, and thus change all the pens at once. Or how about altering it so you can load art package screens in any mode. This will enable you to use Plus colours to liven up your pictures.



Remember a Plus is for life – not just for Christmas!

Listing 2

```
IADI 10·'Plus·colour·selector
MACJ 20·'Keith·Woods·for·Amstrad·Action·1994
AAKK 30·'
MAIJ 40·MODE·2:PEN·1:PAPER·0:CLS:INK·0,0:BORD
     ER·0:INK·1,26
ABNC 50·INPUT"Enter·pen·number·(0-15)·or·16·f
     or·border·-·",p
JANN 60·IF·p=0·THEN·rb=&6400:gg=&6401:GOTO·11
     0
DAHK 70·FOR·a=1·TO·16
LAAO 80·IF·p=a·THEN·rb=&6400+a*2:gg=&6401+a*2
     :GOTO·110
CAJE 90·NEXT·a
CAOG 100·GOTO·40
MAPL 110·FOR·q=1·TO·17:READ·a$:OUT·&BC00,VAL(
     _"&"+a$):NEXT·q
MANE 120·DATA·FF,0,FF,77,B3,51,A8,D4,62,39,9C
     ,46,2B,15,8A,CD,EE
CANC 130·MODE·1
LAOC 140·LOCATE·13,1:PRINT"Colour·Selector"
HAOP 150·LOCATE·13,2:PRINT"---------------"
MAKM 160·LOCATE·5,22:PRINT"Red·-·0····Blue·-·
     0····Green·-·0"
KALG 170·LOCATE·14,25:PRINT"Press·Q·to·end"
DACO 180·SPEED·KEY·2,1
GALH 190·OUT·&7F00,&B8:POKE·&6800,1
GADC 200·POKE·&6400,0:POKE·&6401,0
DAJK 210·r=0:b=0:g=0
HAAB 220·c$=INKEY$:IF·c$=""·THEN·220
EABA 230·c$=UPPER$(c$)
KAAG 240·IF·c$="R"·AND·r<240·THEN·r=r+16:GOTO
     ·320
JAOI 250·IF·c$="R"·AND·r=240·THEN·r=0:GOTO·32
     0
JAML 260·IF·c$="B"·AND·b<15·THEN·b=b+1:GOTO·3
     20
JAAD 270·IF·c$="B"·AND·b=15·THEN·b=0:GOTO·320
JACN 280·IF·c$="G"·AND·g<15·THEN·g=g+1:GOTO·3
     20
JABE 290·IF·c$="G"·AND·g=15·THEN·g=0:GOTO·320
EAGM 300·IF·c$="Q"·THEN·390
CABK 310·GOTO·220
NABO 320·POKE·&6400,r+b:POKE·&6401,g:POKE·&64
     20,r+b:POKE·&6421,g
MADG 330·LOCATE·11,22:PRINT·HEX$(r):LOCATE·12
     ,22:PRINT"·"
HANC 340·LOCATE·23,22:PRINT·HEX$(b)
HABD 350·LOCATE·36,22:PRINT·HEX$(g)
JAGO 360·IF·g<9·THEN·POKE·&6402,&FF:POKE·&640
     3,&F
JALC 370·IF·g>9·THEN·POKE·&6402,0:POKE·&6403,
     0
CAIK 380·GOTO·220
KAIA 390·POKE·&6800,0:OUT·&7F00,&A0:SPEED·KEY
     ·30,2
IAMD 400·MODE·2:INK·0,0:BORDER·0:INK·1,26
ECLO 410·IF·p<16·THEN·PRINT"To·change·pen·num
     ber";p;"to·the·colour·you've·just·chosen
     ·when·in·plus·mode·type:";:GOTO·430
BCMK 420·IF·p=16·THEN·PRINT"To·change·the·bor
     der·to·the·colour·you've·just·chosen·whe
     n·in·plus·mode·type:"
LACL 430·PRINT:PRINT·"POKE·&";HEX$(rb);",&";H
     EX$(r+b)
JAOC 440·PRINT"POKE·&";HEX$(gg);",&";HEX$(g)
OANB 450·PRINT:PRINT"Choose·another·colour·(Y
     /N)·?"
HAEE 460·w$=INKEY$:IF·w$=""·THEN·460
KAMN 470·IF·w$="y"·OR·w$="Y"·THEN·RESTORE:GOT
     O·10
OAAE 480·IF·w$="n"·OR·w$="N"·THEN·PRINT"Cheer
     io·then!":END
CAAL 490·GOTO·460
```



TECHY forum

From the simplest disc drive disagreements to full-blown arguments with your assembler, Techy Forum the place to come. Agony uncle Richard Fairhurst sorts through the mailbag of woes.

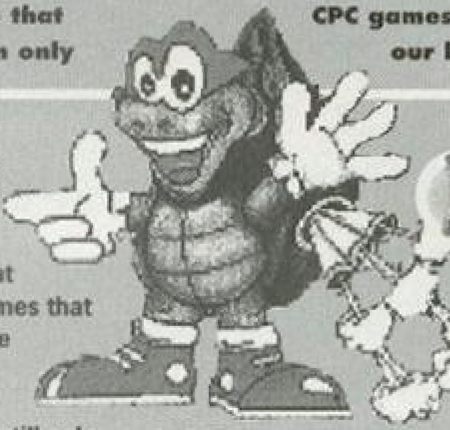
Covertape Clinic

Here are a few pointers to covertape success. First of all, if a program isn't loading, is it intended to be used with your set-up? Some programs are 128K or disc-only, and some object to ROMs plugged in.

If you checked all this and you still have no luck, is it printing 'Read error' or a similar message? If so, send it back to Ablex. They can't help with programs that don't work in the way you expect, or with those that load but don't work – they can only replace faultily duplicated tapes.

If you're having another problem, write to the all-new Covertape Clinic here at Techy Forum, but don't send your tape back.

Finally, if there are any programs you'd like to see on the covertape, write to the same address. We can't guarantee anything (for example, US Gold recently told us that they've lost all their copies of their CPC games), but we'll do our best.



Binning it

All that happens when I type RUN"TRANSFER, as instructed in the last couple of month's covertape pages, is that I get a list telling me all the filenames that have been found. I tried finding the beginning of the file TRANSFER .BIN on the tape, so that this file was the first one to be seen, but I still only got the message Found TRANSFER .BIN. Please tell me where I am going wrong – I can't wait to get *Crazy Cars 3* on to disc.
SF Symonds, Haverhill

Crazy Cars 3 and *Turbo The Tortoise* are both suffering from the same problem I'm afraid, but there is a solution. If you just press CTRL and ENTER when the tape is before the file TRANSFER .BIN, this'll work. Alternatively, type RUN"TRANSFER .BIN (remembering the space before the full stop).

You want to know how all these problems came about? Well, it was due to a slight breakdown in communications between the various members of *Amstrad Action's* editorial team (*The key words there being editorial and breakdown – Karen*).

Still, from now on just one person (me) will be responsible both for putting the tape together and for writing the covertape page, plus we've introduced a smart new menu system, so you shouldn't have any problems from this month. (*Cor, look at those pigs fly! – Karen*)



Easy game

I have a problem with a game I am writing: the next screen takes too long to draw – about seven seconds. While this doesn't seem long, crossing the screen only takes about four. So, trying to solve the problem, I decided to write a machine code program that would hopefully be quicker. Assembler-less, I picked up my machine code manual and wrote the program out on paper. My problem now is that the machine code program doesn't work and only succeeds in crashing the game altogether. The code is...

```
22780    ld hl, ????
   ld b,0
22785    inc b: ld a,21
   cp b: ret z
   ld d,1
22792    ld a,(hl): ld (ix+4),a
     inc hl
     push hl
       ld (ix),b
       push bc
         ld (ix+2),d
       push de: call &7D00: pop de
       pop bc
     pop hl
     inc d: ld a,26
     cp d: jp z,22785
     jp 22792
```

The data for the screen is a list of sprite numbers, stored between &4000 and &58E7. The program works by pre-poking the address of the first byte of the screen data into the addresses 22781 and 22782. The program should peek at this address and obtain a sprite number. This sprite number should be called along with its X and Y positions (both initially 1) just like a BASIC command: 'CALL 32000, sprite number, X position, Y position', the sprite routine being at 32000 (&7000). The program should then move the data address on one and add one to the Y position. If the Y position is 26, the program should reset it, add one to the X position, and then repeat the process until the X position is 21.

Alas, this does not seem to be the case and I cannot see where I have gone wrong. Please, please help me.
Stephen Battey, Birmingham

No assembler? Masochist! There are plenty of decent PD substitutes for *Maxam* available, even if they can't manage its blistering speed (not!). Try the 'KIO-Fox' assembler, for example. It'll make everything a lot easier.

Anyway, to your program. There are two problems with it:
1 You're not setting IX up. Reserve six blank bytes somewhere in memory, and point IX to it (LD IX,...) in the first few lines of the program.
2 You're not setting A up before calling &7D00. A should contain the number of parameters before a routine is called, with IX pointing to parameters, in this case, 3. *Some programs object to not setting the routine up correctly.*
This should get your routine working. When you've finished your game, do send us a copy. **Richard**

Transfer fee

Can you please give me an address where I can obtain a good tape-to-disc transfer program? Is there a universal transfer program

for all tapes, or do I need specific transfer programs for each tape? I would like to transfer tapes from the Hit Squad and Beau-Jolly compilations, Encore, Hi-Tec, Mad and Alternative.
Martin Jenner, Sussex

A universal tape-to-disc transfer program would be the software houses' worst nightmare – they want to stop people copying their games at any cost. The Bonzo series was capable of transferring a large variety of games, but unfortunately it's no longer available. Your best bet for Speedlocked games (the most common protection system) is STS's acclaimed Soft-Lok, available from STS themselves (298c Holton Road, Barry), Campursoft (041 554 4735), and OJ Software (0257 421915). **Richard**



King of the Transfer Fees, Diego Maradona, went to Napoli for a whopping 15,895 million lire in 1984. Now, that's nothing to snort at.

Plotting

I used to use a Tandy printer-plotter to (slowly) scan photographs and such to the screen. Using a photo-diode, a few transistors and the like, I was able to make a simple A/D convertor that plugged into the joystick port, and was read with the following pseudo-program:

```
10 MODE 1: FOR y=400 TO 0: FOR x=1 TO 640
20 move print head to x,y (one 'dot')
30 read output from sensor through joystick port
40 if joy etc. then plot pen colour (four shades)
50 NEXT: NEXT
```

This worked quite well, and I have many family photos safely stored on disc. But then the plotter packed up, and I bought a KX-P 1124 24-pin printer. Six months and many escape sequences later, I still can't program the subroutine in line 20. Is it at all possible?

The local gurus offer vague hints, but no-one has come up with an actual program. I even wrote to Panasonic without success. Please help and restore my faith in fellow Amstraders.
Ted Clarke, Newry

As ever, please remember that we don't have encyclopaedic knowledge of the thousands of printers out there (it would cost thousands of pounds just to buy the most popular models). However, if you're prepared to sit down with the escape codes section of your printer manual, here's how to do it.

First of all, you need to find the escape sequence to do one of the following things: set the line spacing, or feed the paper down by a specified (small) amount. The standard Epson code to set line spacing is 27 65 n, where n is the number of 72nds of an inch every line feed is advanced. For your purposes, 27 65 1 is probably right – but, with the Panasonic being a 24-pin printer, check in your manual first.

Put this code at the start of the program, and between the NEXT statements on line 50, put a simple PRINT #8 to make the printer advance.

That's the vertical displacement sorted. Now you need to move to a horizontal position, for which your printer should have a specific code that you can look up. If not, use the Epson sequence 27 76 01 00 00. This prints one byte of graphics, but since the byte of graphics is 00, it won't print anything, and will just move on by one pixel position. You might need to send a 'empty printer buffer' command immediately afterwards (this varies from printer to printer). **Richard**

Top Tips

Belting it

I have owned a 6128 since 1986, and it has given me excellent service. However, recently it has become increasingly difficult to load files, resulting in the error message 'Drive A: disc missing' even though the disc is in place and one or more files have loaded successfully.

Reluctantly, I accepted that the disc drive needed replacing. Fortunately, I also have an FD-1 second drive and it was surprisingly easy to swap the two drives over. All you need is a screwdriver and a steady hand that won't accidentally touch any of the chips in either the 6128 or on the base of the drives. Otherwise, the drives are only connected by two plugs, which are easy to deal with provided you're careful.

Of course, I then had a perfectly working 6128, but no second drive, so I started phoning around for a replacement. The problem is that 3-inch drives seem to have become extinct, and I couldn't find anyone who could supply one.

Fortunately, I spoke to OJ Software, from whom I'd previously received prompt and efficient service. Although they didn't have any drives in stock, I was able to discuss the problem in some detail and they suggested a new drive belt might cure it.

Removing the drive belt is also easy – although, again, you need to take care. Simply unscrew and unplug the circuit board from beneath the drive to gain access to the belt.

I soon discovered that asking local computer shops and repairers for drive belts produced only incredulous looks and replies that they had never before been asked for such things. However, I eventually found one of the right size in the service section of a local audio shop by asking for a cassette drive belt. It is, however, imperative to take the old one with you to compare, because there is an infinite variety of these things!

The total cost of the repair was £1.50, and I now have a completely restored system. I'd be grateful if you would print this letter, in the hope that it might help keep some of these excellent machines going for a bit longer.
P Harrison, Battle

Many thanks for an excellent (and cheap) solution to a problem, which, if the Techy Forum mailbag is anything to go by, is affecting an increasing number of CPCers these days. **Richard**

Disappointed

Don't believe everything you read on your CPC's screen. In particular, don't believe *Maxam's* disassembly of strange, undocumented opcodes – it will often disassemble undocumented two-byte opcodes as three bytes, so messing up the disassembly for the next byte, which will be taken as part of the current instruction. It's better than *Hackit's* disassembler, of course, which can't even cope with LD A,(address) instructions properly...
Anon, Planet Earth

In two minds

I'm confused. Every time I've read your magazine, you recommend ParaDOS. But in issue 109, Richard Wildey told us all to get ROMDOS. Is this the same as the ROMDOS XL advertised by Siren Software? Which one should I get if I add a Siren 3.5-inch drive to my 464 with DDI-1? I need to use PC discs with a PC transfer program, too, like Siren's PC-Trans. Can I use this with any DOS?
Jon Walker, Chester

ParaDOS is much better than ROMDOS – it's compatible with far more software and it supports more formats (on both drives, as opposed to ROMDOS, which only supports them for drive A). What's more, because you've got a 464, you can just remove the AMSDOS chip from your DDI-1 and replace it with ParaDOS – you don't need a ROM-board. Better still, this operation doesn't require anything apart from a screwdriver with which to lever the chip out (6128 owners have to de-solder the original chip if they want to fit ParaDOS internally!).

ROMDOS XL is just like a plain vanilla ROMDOS, but with a number of utilities added into the ROM. However, the utilities are a little bugged, and generally nowhere near as speedy or user-friendly as ParaDOS's. And you'll be pleased to know that a PC transfer program – such as the shareware DOS Copy, which was on our *AA111's* covertape – will work with either DOS (it'll even work without one).

ParaDOS is available from Campursoft on % 041 554 4735. **Richard**



Is Amstrad Action in two minds about the monsters of DOS?